



UNIVERSITÀ
DEGLI STUDI
FIRENZE

DOTTORATO DI RICERCA IN
Scienze Giuridiche

CICLO XXIX

COORDINATORE Prof. Simoni Alessandro

**Accommodation of Cultural Diversity and Collective Rights at the Crossroads of
Conservation Discourses: the Case of Indigenous Communities in Oaxaca, Mexico**

Settore Scientifico Disciplinare IUS/20

Dottoranda

Dott.ssa Marchi Elisa

Tutore

Prof. Santoro Emilio

(firma)

(firma)

Coordinatore

Prof. Simoni Alessandro

(firma)

Anni 2013/2016 *(di inizio e fine corso)*

Abstract

We are living in the epoch of ‘enlightenment disillusion’ in which the Anthropocene debate shows the inconsistency of some of the pillars of the Western enlightenment thought, e.g., confidence in the abundance of natural resources, faith in historical progress, and conviction of humanity’s dominance over nature. In this scenario, environmental conservation policies are gaining momentum as solutions for the ecological crisis. Currently, the interrelation between conservation and group rights is still underexplored by legal scholars, even if these policies are having a substantial impact on indigenous communities and the enjoyment of their collective rights. In fact, conservation policies are mostly implemented in areas with a significant presence of indigenous and other ethnic groups. This dissertation seeks to bridge this gap by navigating the interrelation among conservation studies, group rights and accommodation of cultural diversity. In detail, it explores how conservation policy can limit or support the enjoyment of collective rights and, more generally, how it should accommodate cultural diversity.

Since the late 1980s, two discourses of conservation have emerged in the field of conservation studies: biodiversity and biocultural diversity. The former is still the dominant focus of conservation policy, while the latter is just appearing from the sub-disciplines of ethnobiology and ethnoecology. In the case of biodiversity, objects of conservation are genetic resources, species, and ecosystems. In the case of biocultural diversity, objects of conservation are ecosystems conceived as the product of an inextricable link between biological and cultural diversities.

Borrowing methodological tools from constructivist, legal pluralist, decolonial, and Science Technology and Social Studies scholarship, and relying on a fieldwork research, this dissertation seeks to answer the following questions: how biocultural diversity discourse shapes the idea of culture and the relationship between humans and non-humans vis-à-vis the dominant biodiversity paradigm; how indigenous communities use biocultural diversity discourse to re-appropriate their way of life the territory; how conservation discourses are ‘vernacularized’ into indigenous customary legal system and legal strategies; and how biocultural diversity discourse can offer insights into the debate on multiculturalism in the era of ecological crisis.

In showing the interconnection between legal and conservation studies, this dissertation offers new insights at the intersection of these two disciplines. Mainly, it suggests new possible fields for future investigations on accommodation of cultural diversity and protection of collective rights in the era of ecological crisis.

Abstract

Il dibattito che si è sviluppato nel campo delle scienze della conservazione riguardo all'impatto negativo dell'uomo sull'ambiente, ha mostrato i limiti di alcuni dei fondamenti del pensiero illuminista, come l'idea dell'abbondanza delle risorse naturali, la fede nel progresso storico e la convinzione della superiorità dell'uomo sulla natura. La necessità di ripensare la relazione tra uomo e natura, al fine di trovare soluzioni per affrontare la crisi ambientale, ha quindi favorito lo sviluppo di politiche di conservazione ambientale. Tuttavia, anche se la gran parte di queste politiche sono promosse in luoghi ad alta presenza di gruppi indigeni, sino a oggi la dottrina giuridica non ha soddisfacentemente esplorato l'impatto che queste hanno sull'effettivo godimento dei diritti collettivi costituzionalmente riconosciuti ai popoli indigeni stessi.

Questa tesi si pone l'obiettivo di colmare tale lacuna dottrinale, analizzando la relazione esistente tra teorie e idee che emergono nell'ambito delle scienze della conservazione, la tutela dei diritti collettivi e la definizione delle politiche di accomodamento della diversità culturale. In particolare, questo lavoro guarda ai meccanismi attraverso i quali le politiche di conservazione ambientale possono limitare o favorire l'effettivo godimento dei diritti collettivi e promuovere una politica d'accomodamento della diversità culturale.

Dagli anni '80, nell'ambito degli studi in materia di conservazione ambientale, sono emersi due discorsi, quello sulla biodiversità e quello sulla diversità bioculturale. Nel caso della biodiversità, dominante nelle politiche conservazioniste, gli oggetti di conservazione sono le specie, le risorse genetiche e gli ecosistemi. Nel caso della diversità bioculturele, discorso emerso più recentemente in discipline come l'etno-ecologia e l'etno-biologia, oggetto di conservazione sono gli ecosistemi concepiti come il prodotto di un vincolo inseparabile tra diversità biologica e culturale.

Prendendo in prestito gli strumenti metodologici di discipline come il costruttivismo sociale, il pluralismo giuridico, il pensiero critico e post-coloniale e gli studi sociali in materia di tecnologia e scienza, questo lavoro vuole rispondere alle seguenti domande: Come il discorso sulla diversità biculturale concepisce l'idea di culture e la relazione tra uomo e ambiente rispetto al paradigma della biodiversità che domina le attuali politiche di conservazione? Come le comunità indigene ricorrono al discorso sulla diversità bioculturale per riappropriarsi del loro territorio? Come i discorsi sulla conservazione sono 'vernacularizzati' nel diritto consuetudinario indigeno? Come il discorso sulla conservazione della diversità biculturale può offrire nuovi spunti per il dibattito in materia di accomodamento della diversità culturale in un'epoca di crisi ecologica?

Mostrando la relazione tra il dibattito in materia di conservazione e quello giuridico, questa tesi offre nuovi spunti per analizzare l'accomodamento della diversità culturale e il godimento dei diritti collettivi in un'epoca di crisi ambientale. In conclusione, vengono proposte una serie di riflessioni che aprono a future ricerche volte all'esplorazione dei confini tra conservazione ambientale e accomodamento della diversità culturale.

Acknowledgement

It is very hard to express in a few lines all the work, experiences, feelings that are behind this dissertation. This work is the product of four years of intense studies, research, meetings as well as, deep feelings of desperation and happiness. This work owns very much to all those persons that, in some ways, stood behind me, supported me, and criticized me; without them, this dissertation would not have been possible.

This dissertation has been a journey that has allowed me to get in contact with amazing people, institutions, and places. To start, I have to thank all the professors that gave me the opportunity to spend consistent time researching and actively participating in their institutions. Thanks to Brunel University and Alexandra Xanthaki for allowing me to booster my knowledge and passion on international human rights law and minority and indigenous rights. I express my gratitude to Margaret Severon for her kindness and friendship and for having offered me a safe space to conduct my library research at the University of Kansas.

Thanks to Professors James Anaya and Robert Williams for welcoming me to Indigenous Peoples Law and Policy Program at the University of Arizona. The University of Arizona has been a second home for me in the last year and a unique place for professional and personal growth. In words, I cannot describe the gratitude that I have for this institution and the people that constitute it. Thanks to all colleges and friends that I met here and that shared their thoughts and kindness with me. Thanks to Professor James Hopkins for allowing me to take part in his project on human rights in the Yaqui territory. I express my gratitude to Professors Williams and Melissa Tatum for their suggestions and comments on the final draft of this work.

Thanks to Juan Carlos Martínez and the Centro de Investigación y Estudios Superiores en Antropología Social (CIESAS) for supporting me during my fieldwork in Oaxaca, Mexico. The fieldwork that I conducted in Mexico, as well as my work with indigenous communities strongly changed my perspective. The longtime spent sharing ideas with indigenous community members, indigenous and non-indigenous friends and colleges actively changed my approach, as a person and a Ph.D. student. The

rediscovered connection with nature through indigenous farmers' stories and experiences, as well as time spent in the forest, gave me new perspectives and raised further questions.

A particular appreciation to the members of the Indigenous communities of Capulálpam de Méndez, Santa Maria Yahuiche and Santiago Lachiguiri that, not only authorized my research in their territory but also allowed me to participate in relevant activities in their communities and spent their time with me sharing their wise and ideas.

Thanks to Professor Emilio Santoro that has always supported my academic work, and to all those colleges that during the years have shared with me their time, passion and ideas. This work owes so much to those people that supported me during the writing process, particularly Andrea Bojorquez, Brian Chanecka, and Shirley Spira. Finally, it was a privilege to have Professor Tatum as an amazing and supportive academic mentor.

I dedicate this work to my mom, dad, and grandparents, without their support I could never have achieved this academic accomplishment. And for those that are looking me from another place, I say: “lo so che voi credevate in me più di quanto io non abbia mai creduto in me stessa.”

Table of Contents

Figures.....	11
Abbreviations.....	12
Introduction.....	15
An Outline of the Chapters	27
Part I Collective Rights and Cultural Diversity at the Intersection of Conservation Discourses. From Biodiversity to Biocultural Diversity: Idea of Nature, Culture, Development and Spaces of Intercultural Dialogue in the Era of Ecological Crisis	31
Chapter 1 Setting the Stage: Accommodation of Cultural Diversity, Collective Rights, and Conservation Discourses	36
1.1 A Latin America Reading of Multiculturalism.....	38
1.2 Cognitive Injustice and Challenges to Multicultural Debate	46
1.3 Universalization of the Euro-Modern Model: Misrepresentation of the ‘Other’ and Monoculture of Knowledge	50
1.4 Decolonization of the Legal Field.....	53
1.5 Cognitive Injustice Framework to Read Conservation Policies in Multicultural States	55
Chapter 2 Biodiversity Discourse: the Dominant Model in Conservation	58
2.1 Biodiversity as a Threatened Resource and the New Dimension of Nature	60
2.2 Biodiversity as Marketable Goods.....	64
2.3 Idea of Nature and Development in the Biodiversity Discourse	66
2.4 Planning and Management of the Territory	69
2.5 Through the Cognitive Injustice Lens: Biodiversity and the Origin of New Legal Fields of Conflict	73
2.6 Intellectual Property Law: the Privilege of Modernity and the Exclusion of the ‘Ecology of Knowledges’	75

Chapter 3 Biocultural Diversity Discourse	81
3.1. Biocultural Diversity Discourse: Emergence of Culture in Conservation	81
3.2 Inextricable Link between Biological and Cultural Diversity	85
3.3 The Role of Culture in Conservation	88
3.4 Construction of Culture as Endangered	92
3.5 Dialogue of Knowledge: Epistemological Change in Conservation	94
Preliminary Conclusion Part I.....	99
Part II Conservation Discourses Meet the Indigenous Struggle over the Territory: the Case of Oaxaca	106
Chapter 4 An Overview of the Mexican Legal System: Indigenous Collective Rights and Indigenous Specificity in Oaxaca	108
4.1 From Agrarian Reform to the Pluricultural State. The Evolution of Indigenous Collective Rights in the Mexican Constitution	109
4.2 Agrarian Reform and Redistribution of Land	109
4.3 Pluricultural State and Indigenous Collective Rights in the Mexican Constitution	111
4.4 The State of Oaxaca: Setting the Scenario.....	118
4.5 Indigenous Peoples and Collective Rights in Oaxaca.....	119
4.6 An Overview on the Indigenous Customary System in Oaxaca.....	123
4.7 <i>Comunalidad</i> and Relationship with Nature.....	129
4.8 Recovering Indigenous Epistemologies: Bringing <i>Maíz</i> to the Frontline of the Indigenous Struggle for Self-Determination.....	135
Chapter 5 A Cognitive Injustice Reading of the Mexican Accommodation of Cultural Diversity and Indigenous Peoples.....	138
5.1 Mexican State and Indigenous Peoples: Setting the Stage	140
5.2 The Assimilationist Phase: Incorporating the Indians into the Nation	142
5.3 The Multicultural Phase: Modernization of the Poor and the Good Indian.....	146

Chapter 6 Indigenous Collective Rights at the Crossroads of Biodiversity Conservation in Mexico	152
6.1 A Brief Overview of the Emergence of the Mexican Conservation Policy	153
6.2 The Natural Capital of Mexico: Ecological Capital and New Sites of Struggles for Indigenous Peoples	155
6.3 Territorial Planning and Management of Nature	158
6.4 Adapting Conservation Policy to the Specificity of Oaxaca	161
6.5 Implementation of the Biodiversity Conservation in Oaxaca: the Case of PROCYMAF.....	163
6.6 Indigenous Collective Rights at the Crossroads of Mexican Conservation Policy	168
Chapter 7 Conservation Discourses and Indigenous Struggle over their Territory: an Insight from the Ground.....	173
7.1 The Case of Santiago Lachiguiri: Protecting the Indigenous Epistemology and Ancestral Agricultural System from the Governmental Approach to Conservation ..	174
7.2 The Indigenous Community of Santiago Lachiguiri: Agricultural System and Relationship with the Territory	175
7.3 Traditional Agriculture and Conservation Discourses.....	179
7.4 Mexican Conservation Policy in Santiago Lachiguiri	186
7.5 Community Re-appropriation of its Territory Through Biocultural Diversity Discourse.....	190
7.6 Santiago Lachiguiri's Incorporation of the Idea of Conservation in Legal Instruments as a Way of Re-appropriating the Community's Territory	194
7.7 Hybridization of the Legal Field: Some Insights from the Ground	200
Chapter 8 Conclusion: Multiculturalism at the Crossroads of Conservation Diversity Discourses	207
8.1 Multiculturalism and Biodiversity Discourse in Mexico.....	208

8.2 Multiculturalism at the Crossroads of Biocultural Diversity Discourse: the Hybridization of the Scientific Debate.	213
8.3 Multiculturalism at the Crossroads of Biocultural Diversity Discourse: the Hybridization of the Legal Field.....	219
8.4 Suggestions for Future Research	223
Bibliography	227
Appendix-List of Interviews	258

Figures

Figure I	Correlation on Languages and Vertebrate	86
Figure II	Global Index of Biocultural Diversity	87
Figure III	Los Sabinos, Sacred Site, Capulálpam de Méndez	90
Figure IV	Maps of the Indigenous Community of Santa Maria Yahuiche	91
Figure V	Santiago Lachiguiri Landscape Shaped by the Itinerant Agriculture	178

Abbreviations

ASAM	Asemblea de Autoridades Mixes
AVC	Area of Voluntary Conservation
CBD	Convention on Biological Diversity
CBPR	Community Based Participatory Research
CCMSS	Consejo Civil Mexicano para la Silvicultura Sostenible
CEMDA	Centro Mexicano de Derecho Ambiental
CEPCO	Coordinadora Estatal de Productores de Café del Estado de Oaxaca
CENAMI	Centro Nacional de Ayuda a las Misiones Indígenas
CODREMI	Comité de Defensa de Recursos Naturales de la Zona Mixe
COINBIO	Indigenous and Community Biodiversity Conservation Project
CONABIO	Mexican Commission for the Knowledge and Use of Biodiversity
CONAFOR	National Forestry Commission
CONANP	National Commission of Natural Protected
CORENCHI	Comité de Recursos Naturales de la Chinantla Alta
EDUCA	Servicios para una Educación Alternativa
ERA	Estudios Rurales y Asesoría
EZLN	Zapatista National Liberation Army
FANAR-RRAJA	Program for the Regularization and Registration of Legal Agricultural Acts
FAO	Food and Agriculture Organization
FPIC	Right to Free Prior Informed Consent
GMO	Genitally Modified Organisms
GRs	Genetic Resources
GAIA	Grupo Autónomo para la Investigación Ambiental
IACHR	Inter-American Commission on Human Rights
ICBG	International Cooperative Biodiversity Groups
ICICO	Integradora de Comunidades Indigenas de Oaxaca
ILO	Interantional Labour Organization
IPL	Intellectual Property Law
IPR	Intellectual Property Rights Regime

ISE	International Society of Ethnobiology
IUCN	International Union for Conservation
LFPPCS	Federal Law on Seed Production, Certification and Commercialization
LGDFS	General Law for Sustainable Forest Development
LGEEPA	General Law of Ecological Balance and Environmental Protection
MBC	Mesoamerican Biological Corridor
MP	Management Plan
NGO	Non Governmental Organization
OECD	Organization for Economic Cooperation and Development
UNOSJO	Unión de Organizaciones de la Sierra Juárez, Oaxaca
OT	Ecological Planning of the Territory
PA	Protected Area
PES	Payment for Ecological Service
PROCEDE	Program for Certification of Rights to Ejido Lands
PRODEFOR	Forestry Development Program
PRODERS	Program for the Regional Sustainable Development
PROCYMAF	Community Forestry Project
NAFTA	North American Free Trade Agreement
NGO	Non-Governmental Organization
RAN	Mexican National Agrarian Register
SAGARPA	Ministry of Agriculture, Livestock and Rural Development
SEMARNAT	Ministry of Environment and Natural Resources
Ser Mixe	Servicio Mixe A.C
SICOB	Sistema Comunitario para el Manejo y Protección de la Biodiversidad
STS	Science Technology and Social Studies
TK	Traditional Knowledge
TRIP	Agreement on Trade-Related Aspects of Intellectual Property Rights
TRR	Traditional Resource Rights
UCIRI	Unión de Comunidades Indígenas de la Región del Istmo
UNEP	United Nation Environmental Programme
UNESCO	United Nations Education, Scientific and Cultural Organization

UNOSJO	Unión de Organizaciones de la Sierra Juárez de Oaxaca
UZACHI	Unión de Comunidades Productoras Forestales Zapotecos Chinantecos Sierra Juárez
WB	World Bank
WRI	World Resources Institute
WWF	World Wildlife Fund

Introduction

As many scholars point out, we are living in a new geological era called Anthropocene.¹ According to Paul Crutzen, this new era is characterized by the central role of humankind² in geology and ecology due to the growing impacts of human activities on the earth and the atmosphere.³ We are living in the epoch of ‘enlightenment disillusion’ in which the conceptualization of the adverse impact of human activities on the earth shows the inconsistency of some of the pillars of the Western enlightenment thought, e.g., confidence in the abundance of natural resources, faith in historical progress, and conviction of humanity’s dominance over nature. In this scenario, environmental conservation policies are gaining momentum as solutions for the ecological crisis.

In recent years, this topic has attracted the attention of legal scholars, opening up a new sub-field of inquiry on the interrelation between environment and legal studies.⁴ For instance, a part of the literature is conceptualizing a new approach for legal research called ‘Earth Jurisprudence’.⁵ This approach abandons a human-centered view of the environment in favor of an eco-centric perspective that reframes the role of humans as partners with nature.⁶

¹ On this point there exists an extensive literature; among others see: Simon Dalby, “Anthropocene Geopolitics: Globalisation, Empire, Environment and Critique,” *Geography Compass* 1, no. 1 (2007): 103–18; Jan Zalasiewicz et al., “The Anthropocene: A New Epoch of Geological Time?,” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 2011.

² Donna Haraway prefers to speak about Capito-cene, to stress the role played by the capitalist system of production into this process. Donna Haraway, “Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin,” *Environmental Humanities* 6, no. 1 (2015): 159–65.; Donna Haraway, Anthropocene Consortium Series, 2016, <https://www.youtube.com/watch?v=fWQ2JYFwJWU&t=4509s>.

³ Paul J. Crutzen, “The ‘Anthropocene,’” in *Earth System Science in the Anthropocene* (Springer Berlin Heidelberg, 2006), 13–18.

⁴ Among others see: Vito De Lucia, “Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law,” *Journal of Environmental Law*, 2015; Ugo Capra, Fritjof, Mattei, *The Ecology of Law: Toward a Legal System in Tune with Nature and Community* (Berrett-Koehler Publishers, 2015).

⁵ For an overview of the debate see: Peter Burdon, “Wild Law: The Philosophy of Earth Jurisprudence,” *Alternative Law Journal*, 2010; Nathalie Rühs and Aled Jones, “The Implementation of Earth Jurisprudence through Substantive Constitutional Rights of Nature,” *Sustainability (Switzerland)*, 2016. Jamie Murray, “Earth Jurisprudence, Wild Law, Emergent Law: The Emerging Field of Ecology and Law—Part 1,” *Liverpool Law Review* 3, no. 35 (2014): 215–31.

⁶ Patrick Tolan, “Ecocentric Perspectives on Global Warming: Toward an Earth Jurisprudence,” *The Global Studies Journal*, 2008.

Another part of the literature looks at how the conceptualization of the ecological crisis and its solutions, can affect identity and collative rights. Anna Grear argues that the apparent neutrality of ideas and discourses, emerging from conservation studies, are hiding new forms of oppression towards marginalized groups.⁷ As Grear illustrates, the uneven distribution of responsibility for the ecological crisis is hidden behind general humanity in the Anthropocene. The construction of humankind as a paradigmatic 'rational human subject' conceals the diverse responsibility and adverse consequences that the ecological crisis is having on distinct groups.⁸

Other authors' work focuses on the theorization of new collective rights emerging from the international environmental law.⁹ From the late 1980s, international treaties and documents have recognized the role of indigenous and local groups in environmental conservation.¹⁰ Specifically, these documents acknowledge the anthropological and

⁷ Anna Grear, "Deconstructing Anthropos: A Critical Legal Reflection on 'Anthropocentric' Law and Anthropocene 'Humanity,'" *Law and Critique*, 2015. See also: De Lucia, "Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law".

⁸ Grear, "Deconstructing Anthropos: A Critical Legal Reflection on 'Anthropocentric' Law and Anthropocene 'Humanity'".

⁹ Harry Jonas, Holly Shrumm, and Sanjay Kabir Bavikatte, "Biocultural Community Protocols and Conservation Pluralism," *Policy Matters*, 2010; Kabir Bavikatte and Daniel F Robinson, "Towards a People's History of the Law: Biocultural Jurisprudence and the Nagoya Protocol on Access and Benefit Sharing," *Law, Environmental and Development Journal*, 2011; Graham Posey, Darrell A., Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities* (Ottawa: International Development Research Center, 1996). Other authors explore the emergence of farmers' rights. For an overview on the debate see: Harry Jonas, Holly Shrumm, and Sanjay Kabir Bavikatte, "Biocultural Community Protocols and Conservation Pluralism," *Policy Matters*, 2010; Kabir Bavikatte and Daniel F Robinson, "Towards a People's History of the Law: Biocultural Jurisprudence and the Nagoya Protocol on Access and Benefit Sharing," *Law, Environmental and Development Journal*, 2011; Graham Posey, Darrell A., Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities* (Ottawa: International Development Research Center, 1996).

¹⁰ Among other see: Human Rights Council, *Draft Declaration on the rights of peasants and other people working in rural areas*, A/HRC/WG.15/1/2, June 30 2013; United Nation Educational, Scientific and Cultural Organization (UNESCO), *Universal Declaration on Cultural Diversity*, November 2 2001; UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage*, Paris, October 17 2003; UNESCO, *Convention on the Protection and Promotion of the Diversity of Cultural Expressions* *Environmental Law*, October 20 2005; General Assembly, *Rio Declaration on Environment and Development*, A/CONF.151/26 (Vol. I) August 12, 1992; United Nations Conference on Environment and Development (UNCED), *Agenda 21*, in Rio de Janeiro, Brazil, 3 to 14 June 1992; United Nations Environment Programme (UNEP), *Convention on Biological Diversity*, 22 May 1992; *CBD Conference of the Parties, Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*, 29 October 2010; Food and Agriculture Organization of the United Nations (FAO), *International Treaty on Plant Genetic Resources for Food and Agriculture*, November 3 2001.

conservationist debates concerning the role of communities' ways of life in conserving biological diversity.¹¹

For example, Article 8(j) of the Convention on Biological Diversity (CBD) calls upon the state to “respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity...”. In this matter, the *Main Lines of an Action Plan for the Implementation of United Nation Educational, Scientific and Cultural Organization (UNESCO) Universal Declaration on Cultural Diversity* aims to achieve among its objectives the recognition of “[indigenous] traditional knowledge, particularly with regard to environmental protection and the management of natural resources, and fostering synergies between modern science and local knowledge.”¹²

The international recognition of the indigenous role in conservation has produced a doctrinal debate on the emergence of a new category of collective rights: ‘biocultural rights.’¹³ In this regard, in the book *Stewarding the Earth: Rethinking Property and the Emergence of Biocultural Rights*, Sanjay Kabir Bavikatte describes biocultural rights as the collective rights of indigenous and local communities to carry out their traditional stewardship roles vis-à-vis Nature according to their ontologies.¹⁴ Scholarly works have started navigating the interconnection of biocultural rights with the following topics: the indigenous right to self-determination and burden of ecological responsibility;¹⁵ the

¹¹ Among others see: Janis B. Alcorn, “Indigenous Peoples and Conservation Conservation Biology 7, No. 2 (1993): 424-426.” *Conservation Biology* 7, no. 2 (1993): 424–26; Fikret Berkes, “Sacred Ecology,” *Sacred Ecology*, 2012; Darrell Addison Posey, ed., *Cultural and Spiritual Values of Biodiversity*. (Intermediate technology publications, 1999); Michael Dove, “Indigenous People and Environmental Politics,” *Annu. Rev. Anthropol.*, 2006.

¹² UNESCO, *Main Lines of an Action Plan for the Implementation of UNESCO Universal Declaration on Cultural Diversity*, General Conference of UNESCO, Paris, 2 November 2001, para.14.

¹³ Kabir Sanjay Bavikatte and Tom Bennett, “Community Stewardship: The Foundation of Biocultural Rights,” *Journal of Human Rights and the Environment*, 2015; Brendan M Tobin, “Bridging the Nagoya Compliance Gap: The Fundamental Role of Customary Law in Protection of Indigenous Peoples’ Resource and Knowledge Rights,” *Law Env’t & Dev. J* 9 (2013): iv.

¹⁴ Kabir Sanjay Bavikatte and Tom Bennett, “Community Stewardship: The Foundation of Biocultural Rights,” *Journal of Human Rights and the Environment*, 2015; Brendan M Tobin, “Bridging the Nagoya Compliance Gap: The Fundamental Role of Customary Law in Protection of Indigenous Peoples’ Resource and Knowledge Rights,” *Law Env’t & Dev. J* 9 (2013): iv. On the theorization of biocultural rights see also: Sanjay Bavikatte, *Stewarding The Earth: Rethinking Property and the Emergence of Biocultural Rights* (Oxford University Press, 2014).

¹⁵ Kabir Sanjay Bavikatte and Tom Bennett, “Community Stewardship: The Foundation of Biocultural Rights,” *Journal of Human Rights and the Environment*, 2015.

intercultural dialogue in a pluralistic society;¹⁶ and the emergence of new legal subjects - e.g., farmers, local groups, and future generations.¹⁷

The interrelation between conservation and group rights is still underexplored by legal scholars, despite the emerging scholarly debate. This dissertation seeks to contribute to this new field of legal inquiry; in particular, it explores how conservation policy can limit or support the enjoyment of collective rights and, more generally, how it should accommodate cultural diversity.

Since the late 1980s, two new objects of conservation have emerged in the field of conservation studies: biodiversity and biocultural diversity. The former is still the dominant focus of conservation policy, while the latter is just appearing from the sub-disciplines of ethnobiology and ethnoecology. In the case of biodiversity, objects of conservation are genetic resources, species, and ecosystems.¹⁸ In the case of biocultural diversity, objects of conservation are ecosystems conceived as the product of an inextricable link between biological and cultural diversities.¹⁹

This shift in perspective can affect the indigenous enjoyment of collective rights, and generally, the debate on accommodation of cultural diversity in the ‘era of environmental crises.’ In order to understand this point, I start from the assumption, rooted into the constructivist, post-colonial, and Science Technology and Social Studies (STS)²⁰ scholarship, that the objects of conservation are not positivist, true, valueless

¹⁶ Giulia Sajeve, “Rights with Limits: Biocultural Rights—between Self-Determination and Conservation of the Environment,” *Journal of Human Rights and the Environment* 6, no. 1 (2015): 30–54.

¹⁷ Brendan Tobin, *Indigenous Peoples, Customary Law and Human Rights—why Living Law Matters* (Routledge, 2014).

¹⁸ Vandana Shiva, “Farmers’ Rights, Biodiversity and International Treaties,” *Economic and Political Weekly*, 1993; John E Haapala Jr, “Farmers’ Rights,” *J. Envtl. L. & Litig.* 19 (2004); Cary Fowler, “Protecting Farmer Innovation: The Convention on Biological Diversity and the Question of Origin,” *Jurimetrics*, 2001, 477–88; Regine. Andersen and Tone Winge, eds., *Realising Farmers’ Rights to Crop Genetic Resources: Success Stories and Best Practices* (Routledge, 2013); Michael Halewood, ed., *Farmers’ Crop Varieties and Farmers’ Rights: Challenges in Taxonomy and Law* (Routledge, 2016); Johanna Gibson, *Community Resources* (Ashgate, 2005); Peter Lawrence, *Justice for Future Generations: Climate Change and International Law* (Edward Elgar Publishing, 2014). See also art. 2 of the Convention on Biological Diversity.

¹⁹ Among others see: Don C DeLong, “Defining Biodiversity,” *Wildlife Society Bulletin* 24, no. 4 (1996): 738–49.;D. Rapport and L. Maffi, “The Dual Erosion of Biological and Cultural Diversity: Implications for the Health of Eco-Cultural Systems,” in *Nature and Culture: Rebuilding Lost Connections*, 2010.

²⁰ STS has questioned positivist science as a discipline based on rational truth. STS scholars have argued that scientific objects are the products of social events, political choices and gender inequality. Among other see: Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton University Press, 1987); Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (1988): 575.

objects, progressively discovered by science.²¹ According to this scholarship, I conceive the objects of conservation as the product of economic, scientific and cultural forces.²²

This allows me to show how the objects of conservation are historically constructed and not progressively discovered by positivist science. Consequently, conservation policy targets some objects of conservation over others based upon a specific construction of nature, particular use of it, and certain meanings over others. Critical and post-colonial scholarship has argued that the imposition of these meanings and uses can lead to forms of cultural and symbolic injustice,²³ non-recognition,²⁴ oppression as a result of cultural imperialism,²⁵ and cognitive injustice.²⁶

To clarify this point, extensively illustrated along this dissertation, I take the example of Genetic Resources (GRs). Biodiversity discourse treats GRs not just as DNA sequences, but also as battlefields of social, economic and cultural meaning that bear specific ideas/representations over nature and relation between humans and non-humans. These representations, eventually impact the way indigenous peoples enjoy their right to self-determination and connected collective rights – such as rights over lands and resources. For instance, under biodiversity discourse, the conceptualization in techno-economic terms of the GRs occurred to the detriment of indigenous social and cultural values and use over it. This exclusion of the indigenous view from the definition of the object of conservation adversely affects their collective rights, allowing the appropriation of these resources without their consultation.

²¹ Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton University Press, 1987); Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (1988): 575.

²²A Escobar, “Whose Knowledge Whose Nature? Biodiversity Conservation and the Political Ecology of Social Movements,” *Journal of Political Ecology*, 1998. For a broader debate see also: Ben Minteer A. and Robert Manning E., eds., *Manning Reconstructing Conservation: Finding Common Ground* (Island Press, 2003); Keith H. Hirokawa, ed., *Environmental Law and Contrasting Ideas of Nature: A Constructivist Approach* (Cambridge: University Press, 2014). On the exclusion of indigenous peoples’ construction of nature from the mainstream environmental laws and policies, see: Catherine Iorns Magallanes, “Native American Values and Laws of Exclusion,” in Keith H. Hirokawa, Ed., *Environmental Law and Contrasting Ideas of Nature: A Constructivist Approach*, ed. Keith H. Hirokawa (Cambridge: University Press, 2014), 200–229.

²³ Nancy Fraser, “From Redistribution to Recognition? Dilemmas of Justice in a ‘post-Socialist’ Age,” *New Left Review*, 1995.

²⁴ Charles Taylor, *Multiculturalism, Examining the Politics of Recognition*, 1994.

²⁵ Iris Marion Young, “Five Faces of Oppression,” *Geographic Thought A Praxis Perspective*, 2009.

²⁶ Santos Boaventura de Sousa, ed., *Another Knowledge Is Possible: Beyond Northern Epistemologies* (Paperback, 2007).

Another example is the commodification of the interrelation between humans and nature in the Payment for Ecological Service (PES). The PES adversely influences the enjoyment of indigenous rights to land and resources by imposing a new use of the territory that conflicts with the use of the community. As I will illustrate in the case-study (Chapter 7), the implementation of PES in the indigenous community of Santiago Lachiguiri in Mexico, eventually affected its traditional agriculture system, which is at the core of the community's survival as a distinct people.

By conceiving of biodiversity and biocultural diversity as discourses, I can show the impact that conservation policy has on collective rights, illustrating how this policy:

1. imposes a particular use and classification of the territory and the resources;
2. embraces a specific system of production; and
3. perpetuates certain hierarchies among different epistemologies.

Bearing in mind these premises, the dissertation looks at the impact of conservation discourses on indigenous collective rights by addressing the following issues:

- a. how biocultural diversity discourse shapes the idea of culture and the relationship between humans and non-humans vis-à-vis the dominant biodiversity paradigm;
- b. how indigenous communities use biocultural diversity discourse to re-appropriate their way of life the territory;
- c. how conservation discourses are 'vernacularized'²⁷ into indigenous customary legal systems and legal strategies; and
- d. how biocultural diversity discourse can offer insights into the debate on multiculturalism in the era of ecological crisis.

Because of the novelty of the field of inquiry, I combine several methodological and theoretical tools to analyze a domain that questions some of the core assumptions of modernity. For this reason, I rely on theories and methodologies developed by different disciplines such as anthropology, sociology, ethnoecology, biology, and legal studies. In

²⁷ Sally Engle Merry, *Human Rights and Gender Violence: Translating International Law into Local Justice* (University of Chicago Press, 2009).

particular, I use critical theory, decolonial studies,²⁸ Science Technology and Social Studies (STS) to navigate the interconnection among conservation of biological diversity, indigenous collective rights, and multiculturalism. Furthermore, Community Based Participatory Research (CBPR) influences this work.²⁹

Scholars have developed the latter approach to integrate indigenous systems of knowledge -and other systems of knowledge- in the design of scientific projects and to conduct fieldwork research.³⁰ At the core of this methodology, there is peer participation of the communities in the definition of scientific objects.³¹ This method is rooted in the critique mentioned above of the separation between the scientific and social fields and aims at democratizing and decolonizing the scientific field.³²

As the scholarship has shown, CBPR has a strong potential for conducting research and implement projects on environmental conservation in indigenous territories.³³ As Luise Fortmann points out, this method develops a better understanding of conservation study throughout collaborative research between local communities and scientists.³⁴ Particularity, this scholarship has deconstructed the idea that the scientists are the only subjects entitled to define the objects of conservation.³⁵

²⁸ The literature refers to this field of study as decolonial, de-colonial or post-colonial. In this work, I will use the term decolonial and I include in this scholarship those authors whose work deconstruct the idea of modernity to promote alternative idea of society and accommodation of diversity in multicultural societies.

²⁹ Among others see: Louise Fortmann, ed., *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together* (John Wiley & Sons, 2009); Justin Jagosh et al., "Uncovering the Benefits of Participatory Research: Implications of a Realist Review for Health Research and Practice," *The Milbank Quarterly* 90, no. 2 (2012): 311–46; Chilisa Bagele, *Indigenous Research Methodologies* (Thousand Oaks: Sage, 2012); Carl Wilmsen et al., eds., *Partnerships for Empowerment: Participatory Research for Community-Based Natural Resource Management* (Routledge, 2012); Bagele Chilisa, *Indigenous Research Methodologies* (Sage Publications, 2011).

³⁰ Bagele, *Indigenous Research Methodologies*.

³¹ Ibid.

³² Ibid.; Alison Jones, "Rethinking Collaboration: Working the Indigene-Colonizer Hyphen," in *Handbook of Critical Indigenous Methodologies*, ed. Norman K. Denzin, Yvonna S. Lincoln, and Linda Tuhiwai Smith (Sage, 2008).

³³ Fortmann, *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together*; Norman K. Denzin, Yvonna S. Lincoln, and Linda Tuhiwai Smith, eds., *Handbook of Critical and Indigenous Methodologies* (Sage, 2008).

³⁴ Louise Fortmann, "Introduction: Doing Science Together," in *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together*, ed. Louise Fortmann (John Wiley & Sons, 2009).

³⁵ For an overview on this debate see: Louise Fortmann, ed., *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together* (John Wiley & Sons, 2009).

Finally, it is worthy to mention that this work owns many of the insights to the so-called ‘scholarship of the South.’³⁶ In this dissertation, South is more than a geographical location; it is an academic alternative to the hegemonic system of production of knowledge, a down-top approach to look at local struggles as new sources of ideas, solutions and social alternatives.³⁷ In other words, the South is a “cultural metaphor, that is to say, as a privileged site for the archeological excavation of modernity needed to reinvent the emancipatory energies and subjectivities of post-modernity.”³⁸

Developed by Sousa Santos and Latin American scholars, this approach is strongly influencing Latin American activists and scholarship, and it gives voice and standing to those groups that have suffered cultural oppression and domination. This approach also means re-appropriation by the academia of that literature that has been margined even by the Western critical thinking –e.g., indigenous intellectuals, located experiences. The ‘scholarship of the South’ moves away from given construction to deal with new emerging topics, such as the interaction among nature, culture, and collective rights.

As many authors have pointed out, the categories offered by the Western modern Eurocentric model are not enough to analyze the current reality and to imagine alternatives.³⁹ This means, giving space to insights from the ground and situated experiences to rethink analytical categories. As the Zapotec philosopher Martínez Luna Jaime suggests, indigenous epistemologies as alternatives cannot be found in the

³⁶ Among others see: Boaventura Santos de Sousa, *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition* (New York, London : Routledge, 1995); Arturo Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?,” *Cultural Studies* 24, no. 1 (2010): 1–65; Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016); Mario Blaser, “Ontological Conflicts and the Stories of Peoples in Spite of Europe,” *Current Anthropology* 54, no. 5 (2013); Jaime Luna Martínez, *Eso Que Llamam Comunalidad* (Oaxaca: Colección Diálogos, 2010); Sofía Robles Hernández and Rafael Cardoso Jiménez, eds., *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*, Vol. 14 (UNAM, 2007).

³⁷ Santos de Sousa, *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition*.

³⁸ Boaventura Santos de Sousa, *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition* (New York, London : Routledge, 1995)., p. 507.

³⁹ Among other see the post-colonialism debate: Vandana Shiva, *Who Really Feeds the World?* (Zed Books Ltd, 2016).; the STS debate: John Law, *After Method: Mess in Social Science Research* (Routledge, 2004); Gisli Palsson Ingold, Tim, ed., *Biosocial Becomings: Integrating Social and Biological Anthropology* (Cambridge University Press, 2013).; Philippe Descola and Bruno Latour, *Approaches to the Anthropocene: A Conversation with Philippe Descola and Bruno Latour* <https://www.youtube.com/watch?v=MDeGaYkhVSo>; Donna Haraway, *2016 Anthropocene Consortium Series*, <https://www.youtube.com/watch?v=fWQ2JYFwJWU&t=4509s>.

university but the field.⁴⁰ For this reason, as Sousa Santos would suggest, in my intent “to discover whatever is on the other side of the line”,⁴¹ I share the voice with Mexican indigenous intellectuals and community members; whose views are often absent from the dominant academic debate in the North. And by North, I mean Europe and North America.

For the above reasons, as part of my methodology, I rely on, not only existing literature but also materials collected during my fieldwork in Mexico, in particular in the State of Oaxaca. The fieldwork took place between August and December 2016. During this time, I collected a vast range of materials, from official policies to indigenous documents.

Concerning legal documents, I accessed several *estatutos comunales* in the archive of the Mexican National Agrarian Register in Oaxaca (for an exhaustive list see the bibliography). Furthermore, I consulted legal acts and documents in the indigenous communities I visited. I also collected several documents from Non-Governmental Organizations’ (NGOs) archives, among them: *estatutos*, declarations, reports, recordings, and final proceedings of meetings and gatherings. Moreover, during my stay in Mexico, I could collect further information and materials through the participation in conferences, seminars, and fora, among others: *Taller Agenda Guelato*, *Congreso Mexicano de Etnobiología*, *Foro de la Red de Etnoecología y Patrimonio Biocultural*.

Also, I conducted several interviews (for a completed list see Appendix-List of Interviews). I relied on semi-structured interviews, which allowed me to adjust the content to the interviewees and the circumstances. I conducted most of the interviews in person and a few over Skype. Once received permissions, I recorded about 90 percent of them. For the selection of the ‘sites’⁴² where conducting the interviews, I borrowed from

⁴⁰ Interview with Martínez Luna Jaime, November 28, 2016, City of Oaxaca. File with author.

⁴¹ Boaventura Santos, *Santos, Boaventura. 2014. Epistemologies of the South. Justice against Epistemicide* (Boulder: Paradigm Publishers, 2014)., p. 21.

⁴² For sites I mean not only locations or places, but also perspectives. On this point see: Eduardo Restrepo and Arturo Escobar, “‘Other Anthropologies and Anthropology Otherwise’: Steps to a World Anthropologies Framework,” *Critique of Anthropology* 25, no. 2 (2005): 99–129.

the ‘multi-sited ethnography’ approach.⁴³ In other words, I interviewed actors belonging to different social, cultural, and political sectors.

This approach is particular suitable to navigate a topic in which scientific, political, legal, and cultural fields overlap. It allows me to show connections and relationships instead of crystalized positions and ideas. In detail, I interviewed subjects belonging to different institutions and sectors: a) Mexican environmental agencies: Ministry of Environment and Natural Resources (Semarmat); National Commission of Natural Protected (Conanp); Mexican Commission for the Knowledge and Use of Biodiversity (Conabio); b) conservationist/environmentalist NGOs: Estudios Rurales y Asesoría, Instituto de la Naturaleza y la Sociedad de Oaxaca (ERA); GeoConservacion; Centro Mexicano de Derecho Ambiental (CEMDA); Unión de Organizaciones de la Sierra Juárez, Oaxaca (UNOSJO); Integradora de Comunidades Indigenas de Oaxaca (ICICO); Grupo Autónomo Para La Investigación Ambiental (GAIA); Consejo Civil Mexicano para la Silvicultura Sostenible (CCMSS); Red de Etnoecología y Patrimonio Biocultural; c) Human Rights NGOs: Servicios para una Educación Alternativa (Educa); Servicio Mixe A.C (SER Mixe); Tequio Jurídico; d) academia; e) indigenous communities: Capulálpam de Méndez; Santiago Lachiguiri; Magdalena Teitipac; Santa María Xadani; Santa Maria Yahnuci.

In the case of the interviews conducted among indigenous communities, I obtained the authorization from the competed indigenous authorities according to the indigenous legal system before starting. In the case of Capulálpam de Méndez, Santiago Lachiguiri, and Santa Maria Yahnuci, I spent some days, in some cases weeks, in the communities. This allowed me to take part in several activities - such as *la fiesta*-, and to have informal chatting. Concerning the interviews with indigenous members, I selected the interviewees based on the snowball sampling method. According to this method, interviewees referred the following one. In the case of Magdalena Teitipac, I carried out a focus group with about ten members, participating mostly authorities.

Finally, to analyze how conservation discourses impact and are integrated into indigenous legal systems, I use a case-study and some examples from my fieldwork.

⁴³ George E. Marcus, “Ethnography In/of the World System: The Emergence of Multi-Sited Ethnography,” *Annual Review of Anthropology* 24, no. 1 (1995): 95–117; Mark-Anthony Falzon, ed., *Multi-Sited Ethnography: Theory, Praxis and Locality in Contemporary Research* (Routledge, 2016).

Given the diversity of indigenous experiences in Oaxaca, generalization is not possible. The case- study is an excellent instrument to infer some insights and ideas. In detail, to look at how conservation discourses are penetrating indigenous legal systems, I borrow tools from the field of legal pluralism. In particular, I use Merry Sally Engle's concept of vernacularization.⁴⁴

In her work on the local adaptation of human rights approaches to violence against women, the legal anthropologist develops the concept of 'vernacularization.' She uses it to describe how ideas and discourses, developed in specific fields- e.g., international arena- can be adapted to local institutions and meanings and, finally, used as forms of local resistance.⁴⁵ In Chapter 7, I will use this idea to show how biocultural diversity discourse, from the conservation debate, is appropriated by an indigenous community in Oaxaca and then translated into its legal strategy/system. In this process, environmental NGOs play an essential role. As I will show, biocultural diversity discourse has been brought at the local level to offer a counter-narrative to the dominant one, allowing the community to re-appropriate their way of living territory and meaning over it.

To conclude, I need to spend a few words on the limit of this dissertation. The materials collected during my fieldwork have allowed me to gain a broad picture of the dynamic and interrelation among conservation policy, indigenous collective rights and indigenous cosmovision in the State of Oaxaca. However, given the limited time, I could not acquire profound insights from any of the groups interviewed. Therefore, my work can only offer some ideas from the ground that further research can develop.

Because this paper is situated at the intersection of several disciplines and experiences, the conclusions of this dissertation are a starting point for future research in this field. Mainly, they offer new conceptual and practical tools to deal with accommodation of cultural diversity in the era of ecological crisis, contributing into an *in fieri* (ongoing) field of inquiry.

Finally, this work strives to be placed among scholarship that promotes '*un uso critico del derecho*' - a critical use of the law. In other words, this scholarship seeks to

⁴⁴ Sally Engle Merry, *Human Rights and Gender Violence: Translating International Law into Local Justice* (University of Chicago Press, 2009).

⁴⁵ Ibid.

rethink the juridical space from the needs and the requests of the oppressed and marginalized. In this regard, there may be an accusation of this dissertation that it is too biased and based on a dichotomous division between Western and non-Western/ modern and non-modern. Yet, the core intent it is to offer a different perspective on ideas that we assume having a positive intrinsic value or a neutral meaning such as conservation of biological diversity and sustainable development. In detail, I want to show how the production of knowledge in conservation studies can have an impact on collective rights and the political relationship between indigenous peoples and the state.

This topic is going to become a vital terrain of inquiry for legal scholars that want to navigate indigenous collective rights, and more broadly, the interconnection among rights, culture, and nature in the next future. In fact, the ecological crisis has led to a loss of faith in modern progress, opening up new space to rethink categories such as the division between nature and culture, and the idea of the planet.⁴⁶ Consequently, the law can become a tool to shape an alternative way of imagining the world and the society. That can occur only giving voice to the margin, to the South and by exploring the new relevant interconnection between environmental studies and society.

⁴⁶ In this regard, see the debate on Gaia, for an overview: Bruno Latour, *Why Gaia is not the Globe* <https://www.youtube.com/watch?v=7AGg-oHzPsM>.

An Outline of the Chapters

This work is divided into two parts. In Part I, I set the theoretical debate in which I conduct my analysis and I develop my thesis in the first three Chapters. In part II, I test my thesis relying on the case study of the Mexican State of Oaxaca.

Chapter 1 sets the theoretical debate in which this work is situated. Because the main objective of this work is to navigate the impact of conservation discourses on the enjoyment of indigenous collective rights, I need to frame my analysis within the broader debate on multiculturalism. As a starting point to illustrate this debate, I use Will Kymlicka's definition of multiculturalism as "a political project that attempts to redefine the relationship between [indigenous peoples] and the state through the adoption of new laws, policies or institutions."⁴⁷

Because this dissertation is mostly based on the case of the Mexican State of Oaxaca, Chapter 1 offers an overview of the Latin American debate on multiculturalism. This specification is needed, due to the colonial history of Latin American countries. In this regard, part I introduces the idea of cognitive injustice as framework to navigate the mechanisms and processes for both the indigenous exclusion and oppression, and the limits for the effective enjoyment of collective rights as enshrined in the constitutions.

Cognitive injustice emerges from the decolonial scholarship. This scholarship, in dealing with the mechanisms of inclusion and exclusion that operate within the multicultural state, has focused on the epistemological dimension of the injustice suffered by indigenous peoples vis-à-vis Eurocentric modernity as hegemonic model. This scholarship looks at the epistemological/ontological exclusion and oppression as a root cause of the persisting violation of indigenous collective rights enshrined in the constitution.

As this literature argues, indigenous peoples have distinctive epistemologies; even if each group is different, generally indigenous distinctiveness is expressed in, among others, a specific relationship with the territory, a specific idea of community and

⁴⁷ Will Kymlicka, "The Rise and Fall of Multiculturalism? New Debates on Inclusion and Accommodation in Diverse Societies," *International Social Science Journal*, 2010, p. 99. See also: Will Kymlicka, "Liberal Multiculturalism as a Political Theory of State–Minority Relations," *Political Theory*, 2017.

economy.⁴⁸ According to this literature, the privilege of the canon of modernity over any other epistemological systems has excluded and oppressed indigenous cosmovisions, and eventually led to their disappearance. The privilege of modernity emerges in the incorporation in state institutions, laws, and policies of a certain idea of nature, economy, and society that is at odds with that of some indigenous groups.

To address the impact that conservation policies are having on indigenous collective rights, based on constructivist, critical and decolonial approach, part I offers an overview on the emergence of biodiversity and biocultural diversity discourses in conservation. I show how these two discourses are based on certain idea of culture, nature, market and the relationship among them.

Chapter 2 shows the emergence of the biodiversity discourse in conservation studies. As I will describe, biodiversity is based on five pillars: privilege of Western modern science to define the object of conservation; construction of nature in economic terms; ecosystem approach that presupposes a separation between nature and culture; and centrality of the management and planning of the environment. Then, through the insights offered by critical and decolonial scholarship, I will show the new symbolic conflicts brought about by biodiversity paradigm and the impact over indigenous collective rights.

Chapter 3 shows the emergence of biocultural diversity as a new discourse and its ‘emancipatory’ potential for indigenous peoples. As I will describe in this chapter, biocultural diversity discourse questions some of the core assumptions of modernity and opens up new spaces for dialogue with indigenous communities. This discourse is based on the following pillars: inextricable link between cultural and biological diversity; relevance of local experiences in the construction of ecosystems; and the need for intercultural dialogue between the Western and non-Western systems of knowledge to define the objects of conservation. Then, through the insights offered by decolonial

⁴⁸ On this point there exists an extensive literature, among others see: Darrel Addison Posey, “Introduction: Culture and Nature - the Inextricable Link,” in *Cultural and Spiritual Values of Biodiversity*, 1999; VictoriaTauli-Corpuz Mander, Jerry, ed., *Paradigm Wars: Indigenous Peoples’ Resistance to Globalization* (Sierra Club Books, 2006); Michel P. Pimbert, “The Need for Another Research Paradigm,” *Seedling* 11, no. 2 (1994): 20–25; Winona LaDuke, “Traditional Ecological Knowledge and Enviromental Futures,” *Colo. J. Int’l Env’tl. L. & Pol’y* 5 (1994): 127; Wildcat Pierotti, Raymond, Daniel, “Traditional Ecological Knowledge: The Third Alternative (Commentary),” *Ecological Applications* 10, no. 5 (2000): 1333–40; Daniel R. Pavlik, Steve, Wildcat, *Destroying Dogma: Vine Deloria, Jr. and His Influence on American Society*. Fulcrum Publishing, 2006. (Paperback , 2006); Vine Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Fulcrum Publishing, 1995). For a situated analysis concerning indigenous communities in Oaxaca see: Chapters 6 and 7.

scholarship, I will show the emancipatory potential of this discourse for indigenous peoples.

Part II changes the scale of analysis, looking at the impact of conservation discourses on collective rights based on the practice of indigenous communities in the Mexican State of Oaxaca. Since the early 1990s, given the high presence of biological diversity, this area has become target of federal conservation policy. The latter has to deal with the presence of the indigenous peoples that have legal titles over about 80 per cent of the Oaxacan territory. This scenario is particularly suitable for showing the impact of this policy on indigenous collective rights. In detail, this part navigates: a) how the official Mexican conservation policy interacts with indigenous collective rights; b) how indigenous communities use biocultural diversity discourse to re-appropriate their way of life the territory; and c) how conservation discourses are ‘vernacularized’ into indigenous customary legal systems and legal strategies.

Before addressing these topics, Chapter 4 familiarizes the readers with the system of indigenous collective rights in Mexico. It introduces the collective rights recognized in the federal Constitution and in the Oaxacan legal system. Furthermore, this part offers a brief overview of the indigenous institutions, customary legal systems and epistemologies. Even if these communities are very different in term of social, economic and cultural conditions, from the late 1980s, indigenous intellectuals have started conceptualizing the indigenous epistemology through the idea of *comunalidad*. Even if this dissertation is not an ethnographic work, through the idea of *comunalidad*, I can offer an overview of the indigenous epistemology in Section 4.7.⁴⁹

Conservation policies need to be analyzed within a network of policies that during the years have imposed meanings and uses over indigenous territories leading to forms of epistemic exclusion and violence. For this reason, relying on the cognitive injustice framework, Chapter 5 shows how modernity, as a dominant paradigm, has shaped the relationship between the Mexican State and indigenous peoples. In particular, this part discusses what currently is politically possible in the field of accommodation of cultural diversity.

⁴⁹ In describing indigenous legal systems and epistemologies, I rely on existing literature, legal and non-legal documents and interviews conducted among members of indigenous communities.

Chapter 6 focuses on the Mexican conservation policy, showing that is shaped by biodiversity discourse on conservation. Relying on the cognitive injustice approach, I will show, how this policy imposes certain meanings and uses over indigenous territories and resources that are at odds with the way some indigenous communities conceive, use and represent the territory and the relationship with nature. I will show the evolution of this policy and the emergence of new legal sites of struggles. Moreover, Section 6.6 offers some preliminary conclusions on how the conservation policy in Mexican is impacting on collective rights.

Finally, Chapter 7, through situated experience of indigenous communities, looks at how indigenous communities use a biocultural diversity discourse to re-appropriate their way of life the territory; and how conservation discourses are ‘vernacularized’ into indigenous customary legal systems and legal strategies. In particular, this chapter tests the potential of biocultural diversity discourse to sustain the enjoyment of collective rights in a case-study of an indigenous community in the Mexican State of Oaxaca. In this case, the community relied on biocultural discourse as a counter-narrative to the dominant federal conservation policy. Finally, Section 7.7 illustrates how the relationship between human beings and nature is brought into the indigenous legal struggles and how some environmental instruments can become emancipatory tools to enhance the right to self-determination.

The last chapter, “Multiculturalism at the Crossroads of Conservation Diversity Discourses”, offers some conclusions and thoughts based on the analysis presented above. Specifically, this part draws some conclusions on: the impact of conservation policies based on a biodiversity discourse on the enjoyment of indigenous collective rights; the potential of a biocultural diversity discourse for both, enhancing the collective rights and offering new insights on the debate on the accommodation of cultural diversity in the era of ecological crisis; and the impact of conservation policies on the legal field. Finally, in Section 8.4, I will offer some suggestions and insights for future research in this field.

Part I Collective Rights and Cultural Diversity at the Intersection of Conservation Discourses. From Biodiversity to Biocultural Diversity: Idea of Nature, Culture, Development and Spaces of Intercultural Dialogue in the Era of Ecological Crisis

This dissertation is situated at the intersection of conservation studies, legal studies, and accommodation of cultural diversity. Specifically, it looks at how discourses developed in biology and ecology can impact the debate on accommodation of cultural diversity, with a particular focus on the construction and the effective enjoyment of indigenous collective rights.

Entities and processes deserving environmental protection have changed over time.⁵⁰ As Van Dyke Fred points out, different societies, in different times, have dealt with conservation and nature in different ways.⁵¹ During the time, attention was given to - among others: natural varieties, flora and fauna, wildlife, fellow creatures, wildness, and nature.⁵²

A review of the relevant scholarship in biology and ecology⁵³ shows that, starting from the late 1980s- early 1990s, biodiversity has become the new object of conservation that focuses on ecosystems, species and genetic resources. Even if developed in conservation studies, biodiversity has migrated out from the 'realm of the scientific' to become a core term in environmental policies, resources management, development projects, market investments, allocation of international aids, governance over natural resources, and environmental justice, among others.

In this matter, international programs and strategies look at the conservation of biodiversity as a paramount strategic tool to fight against ecological crisis and poverty

⁵⁰ Among other see: David Evans, *A History of Nature Conservation in Britain* (Psychology Press, 1997); Robert E. Minter Ben A., Manning, ed., *Reconstructing Conservation Finding Common Ground* (Island Press, n.d.); Patrick Kupper, *Creating Wilderness: A Transnational History of the Swiss National Park*, Vol. 4 (Berghahn Books, 2014).

⁵¹ Fred Van Dyke, *Conservation Biology: Foundations, Concepts, Applications* (Springer Science & Business Media, 2008)

⁵² David Takacs, *The Idea of Biodiversity: Philosophies of Paradise* (Johns Hopkins University Press, 1996).

⁵³ This part is based on the leading scholarship in the field of conservation studies, among others: Wilson, Soulé, Rosen.

and to promote the sustainable development.⁵⁴ Furthermore, conservation of biological diversity is getting a central role in the debate of international bodies that are at the frontline in defending and conceptualizing collective rights.

For instance, the current UN Special Rapporteur on the Rights of Indigenous Peoples, Victoria Tauli-Corpuz, devoted a report to the issue of the conservation of biological diversity and the violation of indigenous peoples' rights.⁵⁵ Another example is the Inter-American system of human rights.⁵⁶ In the case *Kaliña and Lokono Peoples v. Suriname*, the Court decided on the impact that a protected area in the ancestral land of the *Kaliña* community had on indigenous collective rights. In the decision, the Court assessed the role of the indigenous community in the conservation of biological diversity, developing one of the first legal rationales for biodiversity.⁵⁷

In 2011, the traditional assembly of the Santiago Lachiguiri, an indigenous community in the Mexican State of Oaxaca, addressed the community role in conservation of biological diversity. This debate followed the implementation of a federal conservation policy that had adversely affected the indigenous traditional territory and activities. As the tribal members concluded, it is the secular meaning that the farmers have given to their lands that has guaranteed the conservation of biodiversity within their territory for centuries; in fact, the relationship with nature is an intrinsic feature of their epistemology and fundamental component for their survival as a distinctive people.⁵⁸

As this story shows, the term biodiversity has developed a local dimension, spreading to indigenous communities. The transplant of conservation discourse in the indigenous daily experience is also expressed in a gigantic wall painting along a street in the City of Oaxaca in Mexico. The wall painting remands the pedestrians of the

⁵⁴ Some examples are: the A/RES/65/161 resolution of the United Nations Assembly that declares the 2011–2020 as the *United Nations Decade on Biodiversity*; United Nations Environment Programme (UNEP), *Convention on Biological Diversity*, UNEP /Bio. Di v /CONF /1, 24 March, 1992; United Nations, *Millennium Development Goals 2015*.

⁵⁵ U.N General Assembly, *Report of the Special Rapporteur of the Human Rights Council on the Rights of Indigenous Peoples*, Victoria Tauli-Corpuz, A/71/229, 26 July 2016.

⁵⁶ For Inter-American of human rights system, I refer to the jurisprudence developed by the Inter-American Human Rights Commission (IAHRC) and the Inter-American Human Rights Court (IAHrC). These two bodies were created respectively by the American Declaration of the Rights and Duties of Man (1948) and the American Convention on Human Rights (1969).

⁵⁷ Inter-American Court, *Kaliña and Lokono Peoples v. Suriname*, 23 February, 2016.

⁵⁸ Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 “Zona de Preservación Cerro de las Flores”, June 2011.

celebration of the Conservation of Biodiversity Day in Chinantla, an indigenous area located in the Sierra Norte of Oaxaca.

This term has also seeped into the vernacular of the indigenous customary legal system. In the case of the Santa Maria Xadidni, in Oaxaca, three indigenous communities incorporated biodiversity into their *estatuto comunal*- namely customary legal system. In particular, during an interview, some members of one of these three communities told me how biodiversity and related ‘ecological tools’ -such as Payment for Ecological Services- are nowadays part of their strategy to protect their territory against the development of a tourist area, located a few miles from their ancestral land.⁵⁹

The abovementioned examples call upon the legal scholars to pay more attention on the impact that conservation debate can have on the daily enjoyment of indigenous collective rights. For this purpose, part I sets the stage to navigate the interrelation among conservation, indigenous collective rights and multiculturalism.

This work seeks to understand and reframe the debate on cultural accommodation in the era of ecological crisis, in which conservation policies are getting their momentum. In this regard, the ultimate goal of this paper is twofold: show how conservation discourses support or limit the enjoyment of indigenous collective rights, and how these discourses shape the debate on cultural accommodation.

For this purpose, Chapter 1 offers the theoretical framework in which I will analyze the intersection of conservation studies, collective rights, and accommodation of cultural diversity. In this chapter, I present an overview of the multicultural debate in Latin America and then focus on the idea of cognitive injustice, to conclude with a brief description of the interplay among conservation discourses, multiculturalism and collective rights. Particularly, I rely on decolonial perspective to address the impact of conservation on collective rights and more generally on the political project to re-imagine the relation between state and indigenous peoples.

This chapter presents cognitive injustice as one of the root causes of the violation of indigenous collective rights. According to this approach, to understand the injustice that underpins the relationship between indigenous peoples and the state, we need to question the privilege of modernity in the production of knowledge. As decolonial

⁵⁹ Interview with four *comuneros* of Santa Maria Xadani, City of Oaxaca, November 18, 2016, file with author.

authors have pointed out, the perpetuation of modernity as a dominant paradigm that frames the relation between humans and non-humans, the construction of subjectivities, the idea of development and market, leads to the exclusion of indigenous peoples from the fabric of the multicultural state.⁶⁰

To show how conservation policies and laws become new terrains of legal and symbolic conflicts, as well as emancipation, I conceive the objects of conservations as discourses emerging at the intersection of scientific, political and cultural fields.⁶¹ As discourses, they bear a certain idea of nature, relation between humans and non-humans, nature and culture and, hierarchies among systems of knowledge. Consequently, this conceptualization allows me to look at the forms of inclusion and exclusion that these discourses produce in relation to group identities, culture, and collective rights.

This work does not offer a genealogy or archeology of the term biodiversity and biocultural diversity,⁶² yet its goal is to briefly analyze how an object developed in biology and ecology, becomes a discourse in the political and legal realm and what implication it brings about for the conceptualization and enjoyment of collective rights and, more in general, accommodation of cultural differences.

In Chapters 2 and 3, I rely on the theoretical framework offered by constructivism, post-structuralism, critical thinking, and STS in order to navigate the complexity of the interrelation between the scientific and the social fields. In Chapter 2, I will illustrate the role of biologists in constructing biodiversity as a new object of ecological and political concern. Particularly, I will discuss some of the pillars of the biodiversity as a paradigm in conservation; then I will look at how this paradigm has been translated into the legal framework and its implications for indigenous collective rights. In doing that, I will use the example of Intellectual Property Rights (IPR). Embracing a decolonial approach, I will demonstrate that the application of IPR to

⁶⁰ See: Chapter 1.

⁶¹ In this paper, I will use the term discourse, idea and paradigm as interchangeable; however the constructivist, structuralism, post-structuralism and critical studies can use these terms with a different meaning.

⁶² This paper does not embrace the post-structural methodology based on genealogy or archeology of terms. For an overview on that see: Paul Dreyfus, Hubert L. Rabinow, *Michel Foucault: Beyond Structuralism and Hermeneutics*, *Beyond Structuralism and Hermeneutics*, 1983; Michel. Foucault, *Discipline and Punishment: The Birth of the Prison* (Vintage-Random House, 1977); Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (Psychology Press, 2002); Michel Foucault, *The Birth of the Clinic* (Routledge, 2012).

regulate the access and use of Genetic Resources (GRs) and Traditional Knowledge (TK) as new objects of conservation raised a cognitive conflict.

Chapter 3 will illustrate the emergence of biocultural diversity discourse in the late 1990s. This is an *in fieri* (on going) discourse that originates in ethnoecology and ethnobiologists studies. Relying mostly on the literature produced in ethnoecology and ethnobiology, this chapter explores the affirmation of this new discourse and attempts to describe some of its pillars. This discourse has not been embraced in the prevalent policy on conservation, which is based on biodiversity discourse. However, the biocultural discourse presents emancipatory potential for indigenous peoples to re-appropriate their territory and enjoy their collective rights.

To sum up, Chapter 1 sets the theatrical framework to navigate the interrelation among conservation studies, collective rights and multicultural debate; Chapters 2 and 3 familiarize the reader with the debate on conservation, preparing them to understand the impact that conservation discourses are having in the juridical field in the era of environmental crisis. This part seeks to lead the readers in a new field of symbolic and epistemological conflicts and alternative discourses that have an emancipatory potential for the effective implementation of indigenous collective rights.

Chapter 1 Setting the Stage: Accommodation of Cultural Diversity, Collective Rights, and Conservation Discourses

This part offers the theoretical framework in which I will analyze the intersection of conservation studies, collective rights, and accommodation of cultural diversity. In detail, this work seeks to understand and reframe the debate on cultural accommodation in the era of ecological crisis, in which conservation policies are gaining their momentum. This debate is relevant for those countries, such as Mexico, in which hotspot conservation areas overlap with indigenous territories.

In this regard, the ultimate goal of this paper is twofold: show how conservation discourses support or limit the enjoyment of indigenous collective rights, and how these discourses shape the debate on cultural accommodation. For this purpose, I present an overview of the multicultural debate in Latin America and then I focus on the idea of cognitive injustice, to conclude with a brief description of the interplay among conservation discourses, multiculturalism, and collective rights.

This part offers the readers a panorama of the philosophical debate on the relationship between modern state and cultural groups. For the purpose of this work, I will limit my analysis to the relationship between indigenous peoples and the state. In the modern liberal tradition of Western democratic states,⁶³ political philosophers have developed multiculturalism as analytical category to deal with cultural diversity.⁶⁴ This paper defines multiculturalism as “a political project that attempts to redefine the relationship between ethno-cultural minorities and the state through the adoption of new laws, policies or institutions.”⁶⁵

⁶³ When I use the term Western I refer to European and North American modern tradition.

⁶⁴ In this work, I will use multiculturalism and interculturalism as synonyms; however, the academia is debating on their philosophical and analytical differences. In Latin America, the term *interculturalidad*-interculturalism is preferred over multiculturalism. This is due to the inherent Western liberal and neoliberal foundation of the latter. For the North-American and European debate on the difference between the two terms see: Nasar Meer and Tariq Modood, “How Does Interculturalism Contrast with Multiculturalism?,” *Journal of Intercultural Studies*, 2012. and the responses to this article. To grasp the idea of *interculturalida* in Latin America see: Catherine Walsh, *Interculturalidad Crítica Y (de) Colonialidad: Ensayos Desde Abya Yala* (Abya-Yala, Instituto Científico de Culturas Indígenas, 2012).

⁶⁵ Kymlicka, “The Rise and Fall of Multiculturalism? New Debates on Inclusion and Accommodation in Diverse Societies.” p. 99. See also: Will Kymlicka, “Liberal Multiculturalism as a Political Theory of State–Minority Relations,” *Political Theory*, 2017.

I opted for this definition because it offers a broader horizon of theoretical and practical debate compared with other definitions of multiculturalism.⁶⁶ Particularly, this denotation gives me the possibility to investigate the reasons for redefining the relationship between the state and indigenous peoples. As I will illustrate, these reasons arise from the incommensurability of some of the features of the modern liberal state with the cultural requests of indigenous peoples. Therefore, not only I will look at the *sein* (what is the reality) but also at the *sollen* (what it should be); in other words, I will navigate the limit of what is political possible around the idea of multiculturalism in the era of ecological crisis.

In the next section, I will look at the analytical tools and ideas developed by indigenous scholars and decolonial scholarship to navigate the oppression suffered by indigenous communities vis-à-vis modernity as hegemonic model. The exclusion of minorities' culture and identity from the public sphere has always been a matter of concern in the multicultural debate. In this regard, the liberal multicultural scholarship acknowledges that the exclusion of cultural differences from both the public space and the decision-making system is one of the root causes of the oppression suffered by minority groups before the modern liberal state. On this matter, Western liberal philosophers have developed several ideas to describe these phenomena, such as non-recognition,⁶⁷ cultural imperialism,⁶⁸ and cultural and symbolical injustice.⁶⁹

For instance, Charles Taylor analyzes the misrecognition suffered by minorities in society as a paramount issue to address their marginalization and oppression in society.⁷⁰ For the author, the false, distorted, and reduced representation of the minority's identity by the mainstream society can harm a person belonging to this group.⁷¹ In her "five faces of oppression", Iris Young describes the cultural imperialism as one of the root causes of the oppression suffered by some groups in society. Cultural imperialism is the universalization of experiences and culture of the dominant group at the detriment of the

⁶⁶ For an overview of the idea of multiculturalism see: Tariq Modood, "Multiculturalism and Integration: Struggling with Confusion," *Robert Schuman Centre for Advanced Studies*, 2011.

⁶⁷ Charles Taylor, *Multiculturalism, Examining the Politics of Recognition*, 1994.

⁶⁸ Iris Marion Young, "Five Faces of Oppression," *Geographic Thought A Praxis Perspective*, 2009.

⁶⁹ Fraser, "From Redistribution to Recognition? Dilemmas of Justice in a 'post-Socialist' Age."

⁷⁰ Taylor, *Multiculturalism*.

⁷¹ Charles Taylor, *Multiculturalism, Examining the Politics of Recognition*, 1994.

minorities.⁷² Finally, in her theory of justice,⁷³ Nancy Fraser considers cultural domination,⁷⁴ non-recognition,⁷⁵ and disrespect⁷⁶ as forms of cultural or symbolic injustice.⁷⁷ In other words, the author describes them as “institutionalized obstacles to parity of participation in social life.”⁷⁸

Indigenous scholars and scholars from the South (decolonial scholarship) have further developed the idea of cultural and symbolic injustice to describe the oppression that indigenous peoples suffer within the structure of the liberal states. As I will illustrate, these scholars focus on the epistemological/ontological exclusion suffered by indigenous peoples at the advantage of the Eurocentric colonial modern model.

In Latin America, the ‘epistemological/ontological’ issue is the pivot around which decolonial scholars are developing the current debate on multiculturalism and on the obstacles for the effective enjoyment of indigenous collective rights. In fact, indigenous peoples’ experience is embodied with colonialism as form of cultural, social, and political domination. To better understand this point, the next section introduces the multicultural debate in Latin America and describes its core issues.

1.1 A Latin America Reading of Multiculturalism

In Latin America, prominent scholarship divides the relationship between indigenous peoples and the state in two historical phases: the assimilationist and the multicultural phase.⁷⁹ Here, I focus only on the latter.⁸⁰ However, before the 1990s, Latin

⁷² Young, “Five Faces of Oppression.”

⁷³ In her theory of justice, the author focuses on three dimensions of justice: a) economic redistribution; b) cultural recognition; and c) political representation. For each one of these dimensions, the author looks at the institutionalized obstacles to parity of participation in social life that correspond to specific form of injustice. See: Nancy Fraser, *Scales of Justice: Reimagining Political Space in a Globalizing World* (Columbia University Press, 2010).

⁷⁴ See Young’s idea of cultural imperialism.

⁷⁵ See Taylor’s idea of misrecognition.

⁷⁶ For the author, disrespect is rooted on stereotypic public representations that routinely maligned or disparaged a certain group. Nancy Fraser, *Scales of Justice: Reimagining Political Space in a Globalizing World* (Columbia University Press, 2010); Nancy Fraser, “From Redistribution to Recognition? Dilemmas of Justice in a ‘post-Socialist’ Age,” *New Left Review*, 1995.

⁷⁷ Fraser, “From Redistribution to Recognition? Dilemmas of Justice in a ‘post-Socialist’ Age.”

⁷⁸ Nancy Fraser, *Scales of Justice: Reimagining Political Space in a Globalizing World*, p.105.

⁷⁹ There exists a vast literature, among others see: Donna Lee Van Cott, “Indigenous Peoples’ Politics in Latin America,” *Annual Review of Political Science*, 2010; Gemma van der Haar Hoekema, A. J., Willem

American states promoted a mono-ethnic idea of state, in which the *mestiza*⁸¹ was the only recognized identity. In this context, indigenous identity was conceived as transitory, until its assimilation into the mainstream society through the process of modernization.

Starting in the late 1980s-early 1990s through the 2000, Latin American countries went through a wave of multicultural constitutional reforms that overcame the mono-ethnic idea of state in favor of a multi/pluri-cultural one.⁸² According to Donna Lee Van Cott, the Latin American multicultural model presents five key features:⁸³

1) rhetorical recognition of the existence of indigenous peoples as collective entities preceding the establishment of national states; 2) recognition of customary indigenous law as binding public law, typically limited by international human rights or higher-order constitutional rights, such as the right to life; 3) protection of collective property rights from sale, dismemberment, or confiscation; 4) official status for indigenous languages; and 5) access to bilingual education.⁸⁴

Assies, ed., *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America* (Amsterdam: Thela Thesis, 2000); Guillermo De La Peña, "A New Mexican Nationalism? Indigenous Rights, Constitutional Reform and the Conflicting Meanings of Multiculturalism," *Nations and Nationalism*, 2006; Bartolomé Clavero, *Geografía Jurídica de América Latina: Pueblos Indígenas Entre Constituciones Mestizas* (Siglo XXI, 2008); Rodolfo Stavenhagen, "Indigenous Peoples and the State in Latin America: An Ongoing Debate," in *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy*, ed. Rachel Sieder (Palgrave Macmillan, 2002); Rachel Sieder, ed., *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy* (Palgrave Macmillan, 2002).

⁸⁰ For a detailed debate on the assimilationist phase, see Chapter 5.

⁸¹ The *mestizo* was a hybrid identity constructed from the colonizers (Spaniards) and the indigenous cultures. Spaniards and indigenous cultures were considered unfitted for guaranteeing the progress of the Mexican nation. In fact, embracing an evolutionistic approach to culture, they were considered a transitory stage towards the affirmation of the only Mexican identity: the *mestizo*. For an overview of the ideological foundation of the Myth of *mestizaje* and the implementation of the cultural homogenization project in Mexico see: Jorge Hernández Díaz, *Reclamos de La Identidad: La Formación de Las Organizaciones Indígenas En Oaxaca* (Miguel Ángel Porrúa, 2001).

⁸² Bartolomé Clavero, *Geografía Jurídica de América Latina: Pueblos Indígenas Entre Constituciones Mestizas* (Siglo XXI, 2008).

⁸³ In her study, Donna Lee Van Cott ranks Latin American countries based on their level of 'multicultural commitment.' The author uses three analytical categories for grouping Latin American states based on the degree of recognition of collective and cultural rights –e.g. rights to autonomy, language, etc. Countries such as, Colombia, Ecuador, Panama, and Venezuela ranked as "strongly multicultural" states, Argentina, Bolivia, Brazil, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, and Peru as "modest" multicultural state; and Countries that recognize a few or no rights include Belize, Chile, El Salvador, Guyana, and Suriname. Donna Lee Van Cott, "Indigenous Peoples' Politics in Latin America," *Annual Review of Political Science*, 2010., p. 132.

⁸⁴ *Ibid.*, p. 132.

Even if some authors recognize the role of indigenous peoples in achieving the constitutional reforms, as well as the importance of the latter for advancing their rights,⁸⁵ other authors stress the limits and the ambiguities of these reforms.⁸⁶ The first problem scholars have faced is to explain the gap between the recognition and the effective implementation of collective rights in Latin America.⁸⁷ In this regard, scholarship has explored several root causes, from the weakness of the rule of law to structural racism and violence.⁸⁸

In this work, I present the literature that considers the current violation of collective rights as the product of epistemic violence.⁸⁹ In other words, the product of a persisting system of domination in the form of a constant process of modernization towards indigenous peoples. In this matter, speaking about Mexico, Guillermo Bonfil Batalla argues that the decolonization process is incomplete.⁹⁰ As the author explains, the ‘imaginary Mexico’, namely the Eurocentric Western modern project, has never been

⁸⁵ Among others see: Salvador Martí Puig, “The Emergence of Indigenous Movements in Latin America and Their Impact on the Latin American Political Scene Interpretive Tools at the Local and Global Levels,” *Latin American Perspectives* 37, no. 6 (2010): 74–92; Donna Lee Van Cott, *From Movements to Parties in Latin America: The Evolution of Ethnic Politics* (Cambridge University Press, 2007); Aníbal Quijano, “The Challenge of the ‘Indigenous Movement’ in Latin America,” *Socialism and Democracy* 19, no. 3 (2005): 55–78; Alison Brysk, *From Tribal Village to Global Village: Indian Rights and International Relations in Latin America* (Stanford University Press, 2000).

⁸⁶ Simone Rodrigues Pinto and Carlos Federico Domínguez Ávila, “Sociedades Plurales, Multiculturalismo Y Derechos Indígenas En América Latina,” *Política Y Cultura* 35 (2011): 49–66; Maria Luz Endere, “Archaeological Heritage Legislation and Indigenous Rights in Latin America: Trends and Challenges,” *International Journal of Cultural Property* 21, no. 3 (2014): 319–30; Hoekema, A. J., Willem Assies, *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America*.

⁸⁷ Manuel Ignacio Martínez Espinoza, “Reconocimiento Sin Implementación Un Balance Sobre Los Derechos de Los Pueblos Indígenas En América Latina,” *Revista Mexicana de Ciencias Políticas Y Sociales*, 2015; Jorge Dandler, “Indigenous People’s and the Rule of Law in Latin America: Do They Have a Chance?,” in *The (Un) Rule of Law and the Underprivileged in Latin America*, ed. Juan E. Méndez, Guillermo A. O’Donnell, and Paulo Sérgio Pinheiro (University of Notre Dame Press, 1999); Rachel Sieder, “Legal Cultures in the (Un)rule of Law: Indigenous Rights and Juridification in Guatemala,” in *Cultures of Legality: Judicialization and Political Activism in Latin America*, ed. Javier Couso, Alexandra Huneeus, and Rachel Sieder (Cambridge University Press, 2010).

⁸⁸ María Teresa Sierra Hernández, Rosalva Aída, Rachel Sieder, ed., *Justicias Indígenas Y Estado: Violencias Contemporáneas* (FLACSO Mexico/CIESAS, 2013); Lucero Radonic, “Environmental Violence, Water Rights, and (Un) Due Process in Northwestern Mexico,” *Latin American Perspectives*, 2015.

⁸⁹ Santiago Castro-Gómez, “Ciencias Sociales, Violencia Epistémica Y El Problema de La ‘Invención Del Otro,’” *La Colonialidad Del Saber: Eurocentrismo Y Ciencias Sociales. Perspectivas Latinoamericanas*, 2000.

⁹⁰ Guillermo Bonfil Batalla, *México Profundo : Reclaiming a Civilization, Transaltion from Latin America Series* (University of Texas Press, 1996)

dismantled within the structure of the Mexican state.⁹¹ As a consequence, *Mexico profundo* (deep Mexico), namely the oppressed indigenous projects, have never emerged as political alternatives.⁹²

The constitutional multicultural advancement has not changed the privilege of modernity in the public policy toward indigenous peoples. Under the reaction of neoliberal reforms and economic progress, the process of modernization of the indians is still in place. Authors argue that neoliberal reforms and ideology⁹³ have favored the Latin American multicultural constitutional turn, creating new forms of inclusion and exclusion that favor the process of modernization.⁹⁴ Charles Hale well illustrates this critique through the locution ‘neoliberal multiculturalism’ to portray the Latin America contingency.⁹⁵ For the author “collective rights, granted as compensatory measures to ‘disadvantaged’ cultural groups, are an integral part of neoliberal ideology.”⁹⁶

The neoliberal project does not oppose cultural diversity in the same way the mono-ethnic national state did. According to Wirliams Assies, the economic model of

⁹¹ Guillermo Bonfil Batalla, *México Profundo : Reclaiming a Civilization, Transaltion from Latin America Series* (University of Texas Press, 1996).

⁹² Ibid.

⁹³ One important aspect of the neoliberal ideology is the reconfiguration of the modern state. Scholarship has described the neoliberal state as a decentralized state, in which power is limited through the deregulation of the market and the emergence of new actors such as multinational corporations and international financial institutions. These new actors are having a strong influence in shaping state policy and legislation (e.g. World Bank. International Monetary Fund). Reinforcement of state penal component, deregulation of financial flows, reduction of administrative constrictions on the employment and market, reduction of social protections and celebration of the ‘individual responsibility.’ For an overview of the debate on neoliberalism and its critique see: Pierre Bourdieu, “The Essence of Neoliberalism,” *Le Monde Diplomatique*, 1998; Pierre Bourdieu and Loic Wacquant, “New Liberal Speak: Notes on the New Planetary Vulgate,” *Radical Philosophy*, 2001; Ljubiša Mitrović, “Bourdieu’s Criticism of the Neoliberal Philosophy of Development, the Myth of Mondialization and the New Europe (an Appeal for the Renewal of Critical Sociology),” *Philosophy, Sociology and Psychology*, 2005; Eric P. Perramond, “A Brief History of Neoliberalism by David Harvey,” *The Professional Geographer*, 2006; Alfredo Saad-Filho and Deborah Johnston, *Neoliberalism: A Critical Reader* (University of Chicago Press, 2005); Deborah A. Thomas and M. Kamari Clarke, “Globalization and Race: Structures of Inequality, New Sovereignties, and Citizenship in a Neoliberal Era,” *Annual Review of Anthropology*, 2013; Tejaswini Ganti, “Neoliberalism,” *Annual Review of Anthropology*, 2012; Manfred B Steger and Ravi K Roy, *Neoliberalism, A Very Short Introduction*, 2010; Joseph E Stiglitz, “More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus,” *Revista de Economia Política*, 1999.

⁹⁴ Gemma van der Haar Hoekema, A. J., Willem Assies, ed., *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America* (Amsterdam: Thela Thesis, 2000); Charles R. Hale, “Neoliberal Multiculturalism,” *PoLAR: Political and Legal Anthropology Review*, 2005; Will Kymlicka, “Neoliberal Multiculturalism?,” *Social Resilience in the Neoliberal Era*, 2013; Roosbelinda Cárdenas, “Green Multiculturalism: Articulations of Ethnic and Environmental Politics in a Colombian ‘Black Community,’” *Journal of Peasant Studies*, 2012.

⁹⁵ Hale, “Neoliberal Multiculturalism.”

⁹⁶ Charles R. Hale, “Neoliberal Multiculturalism,” *PoLAR: Political and Legal Anthropology Review*, 2005., p. 12.

neoliberalism promotes citizens that are less dependent from the state and more responsible for their welfare.⁹⁷ In this model, cultural affiliations are not opposed as soon as they do not interfere with neoliberal objectives; on the contrary, they can have a value in term of social capital. In fact, under the leading of the World Bank (WB), communities with their cultural, traditional, and social ties became potential for the market as far as they secure stability in the land tenure, efficiency in the management of the resources, and market opportunity through the commodification of cultural expressions.

In this context, constitutional collective rights, in particular right to self-determination and rights to lands and resources, are implemented as soon as they do not threaten the neoliberal project and the canon of modernity such as: economic growth, privilege of the positive science, divide between nature and culture, commodification of nature.⁹⁸ Consequently, the effective enjoyment of the collective rights is subordinated to mechanisms of inclusion and exclusions, which define what is culturally admissible in the public sphere.

As the indigenous scholar, Silvia Rivera Cusicanqui argues: “governments are using cultural rights to divide and domesticate indigenous movements”.⁹⁹ As Hale explains, multiculturalism becomes “the alibi that deflects attention away from the remaking of racial hierarchy, under the triumphant banner of its elimination.”¹⁰⁰ To illustrate this point, Hale and Rosamel Millamán rely on the social political category of the *indio permitido* (authorized Indian).¹⁰¹

As Hale explains, the new divide is between “the ethnicity, which builds social capital, and ‘dysfunctional’ ethnicity which incites conflict.”¹⁰² As the author continues only the former “has passed the test of modernity” while the latter is condemned to “the racialized spaces of poverty and social exclusion.”¹⁰³ Therefore, in the neoliberal

⁹⁷ Hoekema, A. J., Willem Assies, *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America*.

⁹⁸ Hale, “Neoliberal Multiculturalism.”

⁹⁹ Quoted in: Charles R. Hale, “Rethinking Indigenous Politics in the Era of the ‘Indio Permitido,’” *NACLA Reports on the Americas. Report on Race, Part 1*, 2004.

¹⁰⁰ *Ibid.* p. 24

¹⁰¹ Rosamel Millamán Hale, Charles, “Cultural Agency and Political Struggle in the Era of the Indio Permitido,” in *Cultural Agency in the Americas*, ed. Doris Sommer (Duke University Press, 2006), 281–304.

¹⁰² Charles R. Hale, “Rethinking Indigenous Politics in the Era of the ‘Indio Permitido,’” *NACLA Reports on the Americas. Report on Race, Part 1*, 2004., p. 17.

¹⁰³ *Ibid.*, p. 19.

multiculturalism, indigenous epistemologies that challenge or do not fit the neoliberal project and the canon of modernity, are labeled as expression of poverty, ignorance, marginalization and therefore, in need of a process of modernization.

In this context, indigenous scholars and decolonial scholars have developed a corpus of works and ideas to denounce the process of modernization as a constant form of oppression and as a limit for the full enjoyment of collective rights enshrined in constitutions.¹⁰⁴ In this regard, the exclusion of indigenous peoples originates from the perpetuation of modernity as a dominant paradigm that frames among others: the relation between humans and non-humans, the construction of subjectivities, the idea of development and market. For these authors, the recognition of indigenous ways of life and epistemologies in public policy, scientific discourses, and legal systems becomes the core concern that the multicultural debate needs to address to build a more inclusive idea of citizenship.

Latin American scholars have further developed this argument as a core issue to analyze the current status of violation of indigenous collective rights and to reimagine the multicultural policy to reshape the ‘fabric of the state’ in order to accommodate indigenous peoples’ requests.¹⁰⁵ Scholars have forged the idea of cognitive injustice,¹⁰⁶

¹⁰⁴ Among other see: Boaventura Santos, Santos, Boaventura. 2014. *Epistemologies of the South. Justice against Epistemicide* (Boulder: Paradigm Publishers, 2014); Enrique. Dussel, *The Invention of the Americas. Eclipse of “the Other” and the Myth of Modernity* (Continuum Intl Pub Group (Sd), 1997); Bonfil Batalla, *México Profundo : Reclaiming a Civilization*; Aníbal Quijano, “Colonialidad Del Poder, Eurocentrismo Y América Latina,” *La Colonialidad Del Saber: Eurocentrismo Y Ciencias Sociales. Perspectivas Latinoamericanas.*, 2000; Maria Mies and Vandana Shiva, *Ecofeminism* (Zed Books, 1993); Winona LaDuke, *Recovering the Sacred: The Power of Naming and Claiming* (South End Press, 2005); VictoriaTauli-Corpuz Mander, Jerry, ed., *Paradigm Wars: Indigenous Peoples’ Resistance to Globalization* (Sierra Club Books, 2006); Vine Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Fulcrum Publishing, 1995).

¹⁰⁵ J.-M. Barreto, “Epistemologies of the South and Human Rights: Santos and the Quest for Global and Cognitive Justice,” *Indiana Journal of Global Legal Studies*, 2014; Santos, Santos, Boaventura. 2014. *Epistemologies of the South. Justice against Epistemicide*; Quijano, “Colonialidad Del Poder, Eurocentrismo Y América Latina”; Arturo Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?,” *Cultural Studies* 24, no. 1 (2010): 1–65; Marisol De La Cadena, “Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond ‘Politics,’” *Cultural Anthropology*, 2010.

¹⁰⁶ Miranda Fricker, *Epistemic Injustice: Power and the Ethics of Knowing* (Oxford University Press, 2007); Boaventura de Sousa Santos, João Arriscado Nunes, and Maria Paula Meneses, “Opening up the Canon of Knowledge and Recognition of Difference,” in *Another Knowledge Is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, 2007.

introduced by Shiv Visvanathan,¹⁰⁷ it has become popular with De Sousa Santos' scholarship.¹⁰⁸

De Sousa Santos has developed this idea on the following premises: first, the understanding of the world is much broader than the Western understanding of the world;¹⁰⁹ and second, social justice cannot be reached without cognitive justice.¹¹⁰ The latter assumption is based on a corpus of indigenous and non-indigenous scholarship, which has denounced several inconsistencies between the modern state and the indigenous systems of knowledge, in particular in relation to idea of society, nature, and economy.¹¹¹

Using the lens of the cognitive injustice means both, questioning the privilege of modernity in the production of knowledge and meanings, and acknowledging that this privilege is reproduced in the state institutions, laws, policies, scientific debates. As I will show in the following section, through mechanisms of inclusion and exclusion modernity has guaranteed its hegemony. To adduce the relativity of modernity vis-à-vis other epistemologies, De Souse Santos advocates for “a set of inquiries into the construction and validation of knowledge born in struggle, of ways of knowing developed by social groups as part of their resistance against the systematic injustices and oppressions caused by capitalism, colonialism, and patriarchy.”¹¹²

This scholarship has the merit to commencing a new strain of investigation over the oppression suffered by indigenous peoples, focusing on epistemological and ontological

¹⁰⁷ Shiv. Visvanathan, *A Carnival for Science: Essays on Science, Technology and Development* (Calcutta, Chennai, Mumbai: Delhi: Oxford University Press, 1997).

¹⁰⁸ Ibid.; Boaventura De Sousa Santos, “Nuestra America: Reinventing a Subaltern Paradigm of Recognition and Redistribution,” *Rutgers L. Rev.* 54, no. 1049. (2001); Boaventura De Sousa Santos, “Introduction. Creating a Distance in Relation to Western-Centric Political Imagination and Critical Theory,” in *Epistemologies of the South. Justice against Epistemicide*, 2014; Santos Boaventura de Sousa, ed., *Another Knowledge Is Possible: Beyond Northern Epistemologies* (Paperback, 2007).

¹⁰⁹ Boaventura de Sousa Santos, “Epistemologies of the South and the Future,” *From the European South* 1 (2016): 17–29.

¹¹⁰ Ibid.

¹¹¹ On this point there exists a vast literature, among others: Boaventura de Sousa Santos, João Arriscado Nunes, and Maria Paula Meneses, “Opening up the Canon of Knowledge and Recognition of Difference,” in *Another Knowledge Is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, 2007; Habib Irġān, “Science and Cultural Diversity in a Postcolonial Context,” n.d., <http://etnomatematica.org/articulos/Irfhan1.pdf>; Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*; Stephen A. Apffel-Marglin, Frédérique, Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996); Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*.

¹¹² Boaventura de Sousa Santos, “Epistemologies of the South and the Future,” *From the European South* 1 (2016): 17–29.

issues, looking at situated experiences of indigenous communities to questioning the hegemonic model.

I acknowledge that the debate on modernity is endless¹¹³ and using modernity as analytical category can lead to a reductionist and limited analysis.¹¹⁴ For these reasons, I embrace a specific definition of modernity that is functional to this work, and then I rely on situated experiences based on my fieldwork. However, a certain degree of generalization is needed to offer the readers the theoretical framework for this analysis. For this purpose, I conceive modernity as the Eurocentric Western model of thought,¹¹⁵ whose core elements are:

1. *Cartesian, mechanistic separation between nature and culture.* Bruno Latour describes this aspect as the modern practice of purification that separates the human beings from the non-humans.¹¹⁶ As anthropologists, such as Philippe Descola, have pointed out, not all cultures share this construction of nature as separates form culture.¹¹⁷
2. *Individual as socio-political unit.* Since the French revolution, one of the pillars of the Western liberal legal system has been the construction of the political and juridical subjects as individuals, separated from their cultural allegiances. This

¹¹³ The Western philosophy has developed several ideas and construction of modernity. In this regard the debate is endless; among others see: classical philosophers on the foundation of modernity: Thomas Hobbes, John Locke, Jean Jacques Rousseau, Adam Smith, Hans Kelsen; for a critical modernist debate: Jürgen Habermas, Roberto Unger, Michael J. Sandel; post-modern debate: Jacques Derrida, Michel Foucault, Bruno Latour, Peter Fitzpatrick.

¹¹⁴ On the problem of using modernity and dichotomies such as modern/non modern see: Arun Agrawal, "Dismantling the Divide Between Indigenous and Scientific Knowledge," *Development and Change*, 1995.

¹¹⁵ Decolonial scholarship has conceptualized the idea of modernity. Particularly, I refer to the conceptualization of Arturo Escobar in Arturo Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?," *Cultural Studies* 24, no. 1 (2010): 1–65.. For an overview of the debate see, among others: Enrique Dussel, *The Invention of the Americas. Eclipse of "the Other" and the Myth of Modernity* (Continuum Intl Pub Group (Sd), 1997); Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*; Silvia Rivera Cusicanqui, "Chhixinakax Utxiwa. Una Reflexión Sobre Prácticas Y Discursos Descolonizadores," *Modernidad Y Pensamiento Descolonizador. Memoria Del Seminario Internacional*, 2006; Aníbal Quijano, "Colonialidad Del Poder, Eurocentrismo Y América Latina," *La Colonialidad Del Saber: Eurocentrismo Y Ciencias Sociales. Perspectivas Latinoamericanas.*, 2000.

¹¹⁶ Bruno Latour, *We Have Never Been Modern* (Harvard University Press, 2012).

¹¹⁷ Philippe Descola, *Beyond Nature and Culture* (University of Chicago Press, 2013). See also: Dario Novellino, "Contrasting Landscapes, Conflicting Ontologies: Assessing Environmental Conservation on Palawan Island (the Philippines)." " *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*," in *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*, ed. David G. Anderson and Eeva Berglund (New York, Oxford: Berghahn Books , 2003), 171–88; Eduardo Viveiros and De Castro, "Cosmological Deixis and Amerindian Perspectivism," *The Journal of the Royal Anthropological Institute*, 1998.

model is at odds with the experience of some indigenous communities whose social-political unit is not reducible to the individual.

3. *Epistemological privilege of the positive science over other systems of production of knowledges.*¹¹⁸ Positive science has played a paramount role in the marginalization and exclusion of indigenous epistemologies. That occurs by protracting those systems of knowledge that do not fit the canon of positive science as backwards, therefore in need to be modernized.
4. *Economy as independent from social practices and market as self-regulated entity.*¹¹⁹ The capitalistic economic growth is conceived as a rational object to achieve, becoming a norm to evaluate social and economic behaviors. In this context, other ideas of economy are labeled as backwards and anti-progress, becoming object of modernization, regardless their cultural, social and economic relevance for certain indigenous communities.

The next sections will analyze the core elements of the cognitive injustice and the recent development in Latin American collective rights debate.

1.2 Cognitive Injustice and Challenges to Multicultural Debate

As describe above, the recognition in constitution of the right to self-determination and other collective rights has not definitely addressed the marginalization, violation, and oppression faced by indigenous peoples in Latin America. In this part, I analyze the scholarship that has developed the idea of cognitive injustice as a framework to understand the current status of indigenous violation of collective rights in Latin America.

Focusing on indigenous epistemology/ontology as core issue to rethink the relationship between indigenous and states, this scholarship abandons the idea of culture,

¹¹⁸ Boaventura de Sousa Santos, João Arriscado Nunes, and Maria Paula Meneses, "Opening up the Canon of Knowledge and Recognition of Difference," in *Another Knowledge Is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, 2007.

¹¹⁹ Arturo Escobar, "Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South," *AIBR Revista de Antropologia Iberoamericana*, 2016.

as a reified representation of the way of life, separated from it.¹²⁰ On the country, it focuses on epistemological/ontological dimension. This literature shows that indigenous communities have a distinctive way to relate with nature, society, and economy that are at odds with some of the canons of modernity.¹²¹

Authors belonging to decolonial scholarship have developed the category of relational ontologies to describe those ontologies that do not fit the canons of modernity.¹²² In detail, relational ontologies are those ontologies that differs from the following canons of modernity: a) Cartesian, mechanistic separation of culture and nature (human being can dominate the nature); b) individual as social unit; and c) economy as independent from social practices.¹²³

I will use this category to describe the indigenous request vis-à-vis the modern state. Under the lens of cognitive injustice, the full enjoyment of collective rights –e.g., right to self-determination, lands, resources, and languages- can be achieved only deconstructing the privilege of modernity in shaping institutions, laws, and scientific objects.

¹²⁰ Mario Blaser, “Political Ontology: Cultural Studies without ‘cultures’?,” *Cultural Studies*, 2009. In this matter, anthropologists have argued that the cultural difference to address differences in society, but there is the need to shift towards ontology to real understand the idea of difference. However, the distinction between culture and ontology is strongly debated within the anthropological scholarship. For an overview on this topic, see the debate on the motion tabled at the 2008 meeting of the Group for Debates in Anthropological Theory: Ontology is just another word for culture. M. Carrithers et al., “Ontology Is Just Another Word for Culture: Motion Tabled at the 2008 Meeting of the Group for Debates in Anthropological Theory, University of Manchester,” *Critique of Anthropology*, 2010.

¹²¹ Jaime Luna Martínez, *Eso Que Lllaman Comunalidad* (Oaxaca: Colección Diálogos, 2010); Sofía Robles Hernández and Rafael Cardoso Jiménez, eds., *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*, Vol. 14 (UNAM, 2007); Daniel R. Pavlik, Steve, Wildcat, *Destroying Dogma: Vine Deloria, Jr. and His Influence on American Society*. Fulcrum Publishing, 2006. (Paperback , 2006); Vine Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Fulcrum Publishing, 1995); VictoriaTauli-Corpuz Mander, Jerry, ed., *Paradigm Wars: Indigenous Peoples' Resistance to Globalization* (Sierra Club Books, 2006); Guillermo Bonfil Batalla, *México Profundo : Reclaiming a Civilization, Transaltion from Latin America Series* (University of Texas Press, 1996); Enrique. Dussel, *The Invention of the Americas. Eclipse of “the Other” and the Myth of Modernity* (Continuum Intl Pub Group (Sd), 1997); Richard A. Grounds, George E. Tinker, and David Eugene Wilkins, eds., *Native Voices: American Indian Identity and Resistance* (University Press of Kansas , 2003); Erica-Irene A. Daes, “Indigenous Peoples’ Rights to Land and Natural Resources,” in *Minorities, Peoples and Self-Determination: Essays in Honour of Patrick Thornberry*, ed. Nazila Ghanea-Hercock, Alexandra Xanthaki, and Patrick Thornberry (Martinus Nijhoff Publishers, 2005).

¹²² Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016); Mario Blaser, “Ontological Conflicts and the Stories of Peoples in Spite of Europe,” *Current Anthropology* 54, no. 5 (2013); Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?”

¹²³ Arturo Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?,” *Cultural Studies* 24, no. 1 (2010): 1–65., p. 266.

In this scenario, the integration of the indigenous peoples into the fabric of the state can be a new assimilationist or paternalist practice, unless indigenous epistemologies are contemplated for the redefinition of the state's institutions, laws, and policies. Therefore, the cognitive injustice, which lies at the core of the production of knowledge since the beginnings of the modern colonization of the world, is a cause of the political, economic, and cultural injustice suffered by indigenous peoples.¹²⁴ Consequently, the recognition of indigenous epistemologies should be at the frontline of the multicultural debate.

Scholarship belonging to different disciplines –e.g., STS, feminism, decolonialism, constructivism– has denounced the relativity of modernity as a project and the need to include other paradigms into the dialogue.¹²⁵ For instance, decolonial feminism points out that in order to decolonize the feminist debate, it is necessary to

¹²⁴ On this point a vast literature, among others see: Dussel, *The Invention of the Americas. Eclipse of "the Other" and the Myth of Modernity*; Latour, *We Have Never Been Modern*; Rosalva Aída Hernández Castillo Navaz, Liliana Suárez, ed., Navaz, Liliana Suárez, and Rosalva Aída Hernández Castillo, Eds. *Descolonizando El Feminismo: Teorías Y Prácticas Desde Los Márgenes* (Cátedra, 2008); Rivera Cusicanqui, "Chhixinakax Utxiwa. Una Reflexión Sobre Prácticas Y Discursos Descolonizadores"; Coordinadora Nacional Indígena y Campesina, *Política de Género Desde La Cosmovisión Maya*, 2007; Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*; Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*, 2009; Petitjean et al., *Science and Empires : Historical Studies about Scientific Development and European Expansion*; Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*; LaDuke, "Traditional Ecological Knowledge and Enviromental Futures"; Pierotti, Raymond, Daniel, "Traditional Ecological Knowledge: The Third Alternative (Commentary)"; Pavlik, Steve, Wildcat, *Destroying Dogma: Vine Deloria, Jr. and His Influence on American Society*. Fulcrum Publishing, 2006.; Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*.

¹²⁵ Dussel, *The Invention of the Americas. Eclipse of "the Other" and the Myth of Modernity*; Latour, *We Have Never Been Modern*; Rosalva Aída Hernández Castillo Navaz, Liliana Suárez, ed., Navaz, Liliana Suárez, and Rosalva Aída Hernández Castillo, Eds. *Descolonizando El Feminismo: Teorías Y Prácticas Desde Los Márgenes* (Cátedra, 2008); Rivera Cusicanqui, "Chhixinakax Utxiwa. Una Reflexión Sobre Prácticas Y Discursos Descolonizadores"; Coordinadora Nacional Indígena y Campesina, *Política de Género Desde La Cosmovisión Maya*, 2007; Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*; Laurelyn Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*, Cambridge University Press, 2009; Patrick Petitjean et al., *Science and Empires : Historical Studies about Scientific Development and European Expansion*, Boston Studies in the Philosophy of Science (Springer Science & Business Media, 1992); Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*; LaDuke, "Traditional Ecological Knowledge and Enviromental Futures"; Pierotti, Raymond, Daniel, "Traditional Ecological Knowledge: The Third Alternative (Commentary)"; Pavlik, Steve, Wildcat, *Destroying Dogma: Vine Deloria, Jr. and His Influence on American Society*. Fulcrum Publishing, 2006.; Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*.

rethink categories, taking into account relational ontologies to understand the multiple discrimination that indigenous women suffer.¹²⁶

Authors belonging to STS and ecofeminism have criticized the separation between nature and culture as a feature of modernity.¹²⁷ In detail, Bruno Latour describes this aspect of modernity as a practice of purification that separates the human beings from the non-humans.¹²⁸ Furthermore, eco-feminists advocate for deconstruct the fictional separation between nature and culture that has been a tool of perpetuation of Western and patriarchal supremacy.¹²⁹

Concluding, this scholarship advocates for the need to include other epistemologies into the political debate, considering the modernity as incapable to address the current challenges. In this regard, Mario Blaser points out that “the promise of modernization no longer appears as persuasive (which does not mean totally unpersuasive either), and thus a space gets opened to perform other stories and other propositions about how different worldings might relate.”¹³⁰

Once epistemology becomes a core issue to address the multicultural debate, scholarship has engaged in understanding the mechanisms that the dominant epistemic model uses to exclude and marginalize other systems of knowledge. In the next section, I will offer a brief overview of the mechanisms of universalization of the Euro-modern model through both, the inferiorization of the other and the monoculture of knowledge. Then, Section 1.4 will navigate the debate on decolonization of the legal field. Particularly, it will focus on both, the cultural sovereignty, as component of the right to self-determination, and the hybridization of the legal field to accommodate relational ontologies.

¹²⁶ Coordinadora Nacional Indígena y Campesina, *Política de Género Desde La Cosmovisión Maya*; Navaz, Liliana Suárez, Navaz, Liliana Suárez, and Rosalva Aída Hernández Castillo, Eds. *Descolonizando El Feminismo: Teorías Y Prácticas Desde Los Márgenes*.

¹²⁷ Bruno Latour, *We Have Never Been Modern* (Harvard University Press, 2012); Maria Mies and Vandana Shiva, *Ecofeminism* (Zed Books, 1993).

¹²⁸ Latour, *We Have Never Been Modern*.

¹²⁹ Maria Mies and Vandana Shiva, *Ecofeminism* (Zed Books, 1993).

¹³⁰ Blaser, “Ontological Conflicts and the Stories of Peoples in Spite of Europe.”, p. 557.

1.3 Universalization of the Euro-Modern Model: Misrepresentation of the ‘Other’ and Monoculture of Knowledge

As authors have pointed out, in order to justify the supremacy and the perpetuation of the privilege of Euro-modernity over other epistemological systems, the latter are represented as inferior, backwards, anti-progress, savages, and non-modern.¹³¹ In this context, the Euro-modernity is universalized and the otherness relegated to the past or to marginality, thus excluded from any scientific, legal and political debate.

Scholarship explains that the universalization of the canon of modernity and the ‘inferiorization’ of other epistemologies is based on the metonymic reason that stands at the core of modernity.¹³² According to metonymic reason, none of the parts can be conceived outside its relationship with the totality. The progress is not intelligible outside the idea of regression, savage outside civilized and traditional knowledge is not intelligible outside its relationship with the scientific knowledge.¹³³ From here, the creation of a reductionist and dichotomist grid to read the experience of the ‘otherness’. As Escobar explains, “in universalizing itself, and in treating other groups as different and inferior through knowledge-power relations (coloniality), dominant forms of Euro-modernity have denied the ontological difference of those others.”¹³⁴ This system has served to perpetuate the privilege of modernity as system of knowledge.

In this matter, focusing on the U.S and the Australasia legal systems, Robert Williams illustrates how the construction of indigenous peoples as savages has penetrated into these Western democracies through the doctrine of discovery and other legal principles.¹³⁵ The author advocates for overcoming the ‘Western obsession’ of using the

¹³¹ On this point an extensive literature among other see: Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?”; Dussel, *The Invention of the Americas. Eclipse of “the Other” and the Myth of Modernity*; Gustavo Esteva, “Hosting the Otherness of the Other: The Case of the Green Revolution,” in *Decolonizing Knowledge: From Development to Dialogue*, ed. Stephen Apffel-Marglin, Frederique Marglin A., 1996, 249–78; Eduardo Viveiros and De Castro, “Cosmological Deixis and Amerindian Perspectivism,” *The Journal of the Royal Anthropological Institute*, 1998; Robert A. Williams, *Savage Anxieties: The Invention of Western Civilization* (Macmillan, 2012).

¹³² Boaventura Santos, *Santos, Boaventura. 2014. Epistemologies of the South. Justice against Epistemicide* (Boulder: Paradigm Publishers, 2014). p. 266.

¹³³ Ibid. p. 266.

¹³⁴ Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?”, p. 9.

¹³⁵ Robert A. Williams, *Savage Anxieties: The Invention of Western Civilization* (Macmillan, 2012).

language of savagery to justify the use of racist legal principles, and concludes that: “[t]he burning question that should occupy our time then, I believe, is whether Western civilization will be able to reinvent itself and its law of indigenous peoples' human rights without using the idea of the savage.”¹³⁶

Once this process of exclusion is revealed, the multicultural political project needs to redress this kind of injustice. In this regard, embracing a cognitive injustice approach, the recognition of different epistemologies/ontologies becomes a core issue to rethink the multicultural political project; it adds a new layer of complexity to the traditional debate on accommodation of cultural diversity asking for a deeper understating of the relationship between the state and indigenous peoples.

Mario Blaser suggests to read the multicultural debate within the so-called political ontology. As the author explains, political ontology is a project that “meant to simultaneously imply a certain political sensibility, a problem space, and a modality of analysis or critique. The political sensibility can be described as a commitment to the pluriverse...in the face of the impoverishment implied by universalism.”¹³⁷ As Blaser continues, multiculturalism should engage with what is politically possible. As he explains, most of the multicultural literature has limited the political debate to the control over resources; however, a situated analysis of the indigenous practices show that what is at stake is more than resources.¹³⁸ In this regard, different meanings over territory, different ways of reality and interacting with nature, different ideas of society become central concerns. In other words, different ways of thinking about reality and society.

In this context, multiculturalism, as a political project to redefine the relationship between state and indigenous peoples, needs to engage with the existence of other epistemologies as a possibility to imagine what is legally and politically possible and reveal the privilege of the canon of modernity in shaping the political and legal sphere.

Embracing this approach means that the effective enjoyment of collective rights can occur only by recognizing the adverse effects on indigenous epistemologies brought about by the modern model; acknowledging the privilege of modernity in shaping

¹³⁶ Williams, *Savage Anxieties: The Invention of Western Civilization.*, p. 236.

¹³⁷ Mario Blaser, “Political Ontology: Cultural Studies without ‘cultures’?,” *Cultural Studies*, 2009.

¹³⁸ Mario Blaser, “Political Ontology: Cultural Studies without ‘cultures’?,” *Cultural Studies*, 2009.

policies, laws and institutions; and re-appropriating meanings and discourses that has been marginalized.

Decolonial scholarship argues that in a multicultural state is necessary a process of decolonial hybridization of both the scientific debate and the existing institutions.¹³⁹ Consequently, this scholarship suggests looking at two processes: decolonization of knowledge and decolonization of the legal field.¹⁴⁰ Concerning the former, this scholarship stresses the need to overcome the monoculture of knowledge in favor of the ecology of knowledges or pluriverse.¹⁴¹ On decolonizing the legal field, some authors have proposed to look at that process of hybridization through which distinctive epistemologies are brought into the legal field.¹⁴²

De Sousa Santos describes the privilege of modernity over other epistemologies as ‘monoculture of knowledge’.¹⁴³ The ‘monoculture of knowledge’ is opposed to the ‘ecology of knowledges’. The ecology of knowledges promotes an intercultural dialogue, not a relativistic one. As Santos explains, this approach promotes ‘equality of opportunity’ in epistemological disputes that aim at maximizing their contributions and building a more democratic and just society and at decolonizing knowledge and power.¹⁴⁴

This means to conceptualize the idea of multicultural citizenship and multicultural democracy in order to include policies and rights that address the recognition of different ways of interrelate with nature, conceive knowledge, society, and economy. The

¹³⁹ Sousa Santos, “Epistemologies of the South and the Future.”

¹⁴⁰ Sousa Santos, “Epistemologies of the South and the Future.”

¹⁴¹ Boaventura de Sousa Santos, João Arriscado Nunes, and Maria Paula Meneses, “Opening up the Canon of Knowledge and Recognition of Difference,” in *Another Knowledge Is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, 2007; Stephen A. Appfel-Marglin, Frédérique Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996); Norman K. Denzin, Yvonna S. Lincoln, and Linda Tuhiwai Smith, eds., *Handbook of Critical and Indigenous Methodologies* (Sage, 2008); Laurelyn Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge* (Cambridge University Press, 2009); Vandana Shiva, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology* (Palgrave Macmillan, 1993).

¹⁴² Boaventura Santos, Santos, Boaventura. 2014. *Epistemologies of the South. Justice against Epistemicide* (Boulder: Paradigm Publishers, 2014); Marisol De La Cadena, “Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond ‘Politics,’” *Cultural Anthropology*, 2010; Mario Blaser, “Notes towards a Political Ontology of ‘Environmental’ Conflicts,” *Contested Ecologies: Dialogues in the South on Nature and Knowledge*, 2013.

¹⁴³ Santos, Arriscado Nunes, and Meneses, “Opening up the Canon of Knowledge and Recognition of Difference.”

¹⁴⁴ Ibid.

following section looks at the decolonization of the legal field as remedy to overcome the privilege of the cannons of modernity in a multicultural society.

1.4 Decolonization of the Legal Field

To decolonize the legal field, some authors have proposed to look at processes of hybridization through which, distinctive epistemologies are brought into the legal field.¹⁴⁵ In term of conceptualization of collective rights, this means recognizing cultural/epistemological sovereignty as an intrinsic component of the rights to self-determination and pre-condition to exercise other collective rights.

Some indigenous North American scholars have developed the concept of cultural sovereignty to include an epistemological component in the understanding of the right to self-determination.¹⁴⁶ For these authors only by recognizing cultural sovereignty as intrinsic component of the right to self-determination, indigenous tribes can effectively enjoy their rights. The idea of sovereignty is not limited to the control over resources and the self-government, but includes also a cultural/epistemological dimension. On this point, Rebecca Tsosie explains:

By looking "within"-to the cultural sovereignty of Native groups-we can better understand the central components of sovereignty as it is exercised and understood within Native communities. Cultural sovereignty is the effort of Native peoples to exercise their own norms and values in structuring their collective futures. Thus, cultural sovereignty is an internal phenomenon, and

¹⁴⁵ Santos, Santos, *Boaventura*. 2014. *Epistemologies of the South. Justice against Epistemicide*; De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'"; Blaser, "Notes towards a Political Ontology of 'Environmental' Conflicts."

¹⁴⁶ Among other see: Wallace Coffey and Rebecca Tsosie, "Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations," *Stanford Law and Policy Review*, 2001; Rebecca Tsosie, "Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought," *Michigan Journal of Race and Law*, 2005; Vine Deloria and M. Lytle Clifford, *The Nations within: The Past and Future of American Indian Sovereignty* (University of Texas Press, 1984); Sarah Krakoff, "A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation," *Or. L. Rev.* 83 (2004); Robert Allen Warrior, "Intellectual Sovereignty and The Struggle for An American Indian Future. Chapter 3 of Tribal Secrets," *Wicazo Sa Review*, 1992; S. James Anaya, *Indigenous Peoples in International Law* (Oxford University Press, 2004).

Native understandings of sovereignty are rooted ‘within the way of life from which each of us emerges’.¹⁴⁷

In this context, sovereignty means re-appropriation of the meanings and symbols that the mainstream society has delegitimized and misrepresented. It also means, re-appropriate the use of the land and resources according to the community’s cosmovision, and way of life. As Wenona Singel argues, cultural sovereignty refers to the counterforce to the dominant narrative that constructs the indigenous history and institutions.¹⁴⁸ She sustains that this concept serves to dismantle the European colonization, and the paternalistic and assimilationist policies imposed to indigenous peoples. As the author explains:

Cultural sovereignty refers to tribes' efforts to represent their histories and existence using their own terms, and it acknowledges that each Indian nation has its own vision of self-determination as shaped by each tribe's culture, history, territory, traditions, and practices.¹⁴⁹

In this sense, cultural sovereignty is a fundamental component of the rights to self-determination. The latter cannot be limited to access to lands and resources, but include the respect for the indigenous way of life in shaping indigenous institutions, systems of law, and policies.

Some authors have started navigating the complex issue of the hybridization of the legal field to accommodate relational ontologies.¹⁵⁰ For instance, Marisol De La Cadena’s scholarship has focused in addressing the legal and political accommodation of those ontologies that do not separate between human beings and nature.¹⁵¹ In the case of the Andes, some indigenous groups interrelate in their daily life with entities- contemporarily spiritual, human, and natural- that she called earth beings. These entities

¹⁴⁷ Rebecca Tsosie, “Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought,” *Michigan Journal of Race and Law*, 2005.

¹⁴⁸ Wenona T. Singel, “Cultural Sovereignty and Transplanted Law: Tensions in Indigenous Self-Rule,” *Kan. JL & Pub. Pol’y* 15 (2005): 357:368.

¹⁴⁹ *Ibid.*, 358.

¹⁵⁰ Some anthropologists have stated to navigate this complex topic, see: De La Cadena, “Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond ‘Politics’”; Mario Blaser, “Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages,” *Cultural Geographies*, 2012; Arturo Escobar, “Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South,” *AIBR Revista de Antropologia Iberoamericana*, 2016.

¹⁵¹ Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016).

cannot find a correspondence in the Western political and legal categories.¹⁵² As De La Cadena argues, the traditional political theory shows its limits no including the earth-beings in the political and legal debate.¹⁵³ Her work raises several challenges that are relevant for the legal field in the era of ecological crisis. In fact, as I will describe, conservation policies ultimately address the relationship among nature, human beings and non-human beings.

The integration of indigenous cosmovision in the definition of the environmental policies is going to challenge the legal fields. As the work of De La Cadena, Blaser, and Escobar shows, in recent years the process of hybridization of the Western legal field has started.¹⁵⁴ The main example is the constitutionalization of the right of *Pachamama* and of Mother Earth in Ecuador and Bolivia.¹⁵⁵ A further example is the Supreme Court of Colombia¹⁵⁶ and New Zealand parliament¹⁵⁷ recognition of inanimate entries' - e.g., river, as juridical personhood.

The next section will explain the reasons for applying the cognitive injustice framework to address the impact of conservation policy on indigenous collective rights.

1.5 Cognitive Injustice Framework to Read Conservation Policies in Multicultural States

In this work, I relay on the cognitive injustice framework to analyze the impact that conservation policies are heaving on indigenous collective rights and on the debate on multiculturalism in the era of ecological crisis. I chose this framework for two

¹⁵² De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*.

¹⁵³ Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010.

¹⁵⁴ Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010; Mario Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages," *Cultural Geographies*, 2012; Arturo Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?," *Cultural Studies* 24, no. 1 (2010): 1–65.

¹⁵⁵ De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'"; Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages"; Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?"

¹⁵⁶ Colombian Constitutional Court, T-622 de 2016, November, 10 2016.

¹⁵⁷ New Zealand, *Te Awa Tupua (Whanganui River Claims Settlement)*, Act 2017 (2017/7), March, 20 2017.

reasons: a) this work is built on the premises that the objects of conservation are not neutral scientific objects, but bears specific meanings; and b) the need to look into the challenges that conservation studies can bring in the legal field, taking into account the requests and needs of indigenous communities.

Broadly speaking conservation policy deals with the relationship among nature, humans, non-humans, and market. The way this relationship is regulated, thought, and experienced is not universal. However, modernity has imposed its own way to deal with nature, universalizing its practice. Some scholars have relied on cognitive injustice formwork to denounce the exclusion of other systems of knowledge from the definition of the objects of conservation.¹⁵⁸

In this regard, Vandana Shiva uses the concept of ‘monocultures of mind’ to explain the exclusion of other systems of cultivation from the dominant model of conservation.¹⁵⁹ For the author, for centuries, the ‘no alternative syndrome’ has justified the exclusion of other systems of cultivation that are fundamental to maintain the biological diversity. The author concludes that local experiences oppose the monoculture of mind in order to maintain a diversification of the cultivation systems, which is also fundamental to preserve other ways of life and epistemologies.¹⁶⁰

As Shiva, other authors have stressed that the exclusion of other ways of relate with nature can eventually marginalize, oppress, and suppress other cultures.¹⁶¹ For this reason, it is necessary to navigate the connection of this phenomenon with the theorization and enjoyment of collective rights. On this matter, the daily experiences of indigenous and local communities show that conservation issues are more than a stand for the preservation of GRs and ecosystems. They are new sites of symbolic conflicts, and means for resistance. For instance, the preservation of native seeds is not only an *in situ* conservation technique, but also a way to resist against the monoculture of mind, to

¹⁵⁸ Vandana Shiva, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology* (Palgrave Macmillan, 1993); Stephen A. Appfel-Marglin, Frédérique, Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996); A Escobar, “Whose Knowledge Whose Nature? Biodiversity Conservation and the Political Ecology of Social Movements,” *Journal of Political Ecology*, 1998; Enrique Leff, *Racionalidad Ambiental: La Reapropiación de La Naturaleza, La Reapropiación Social de La Naturaleza*, 2004.

¹⁵⁹ Shiva, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*.

¹⁶⁰ Ibid.

¹⁶¹ Appfel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*.

preserve epistemological systems, and eventually to advance the right to self-determination and other collective rights.

To navigate this complex topic, I develop my analysis on the assumption, rooted into the constructivist, post-colonial, and STS scholarship, that the objects of conservation are not positivist, true, valueless objects, progressively discovered by science. According to this scholarship, I conceive the objects of conservation as the product of economic, scientific and cultural forces. This allows me to show how the objects of conservation are discourses that bear specific constructions of nature, uses of it, and meanings over others.

Based on this assumption, I will analyze two discourses emerging from conservation studies: biodiversity and biocultural diversity. To unhidden their neutrality, I will address the following topics: how the objects of conservation emerge and who defines them; what are the meanings that conservation policies bear; what are the legal instruments through which these meanings are implemented; and what are the mechanisms through which indigenous epistemologies are excluded or included from the conservation debate.

Rely on the cognitive injustice approach, I can read the implementation of the conservation policies looking at the impact on indigenous cultural sovereignty as component of the rights to self-determination. Moreover, I can investigate the inclusion or exclusion of indigenous epistemology in the definition of the objects of conservation. Furthermore, I can navigate how discourses on conservation support or limit the integration of relational ontologies in the legal field. Finally, this approach allows me to show the emancipatory potential of conservation discourses for indigenous peoples.

For emancipation, I mean the way discourses can be used to create and protect certain aspiration, instead of perpetuating the status quo.¹⁶² For instance, in the case of indigenous peoples, the expectation for the effective enjoyment of self-determination, as conceived in a specific community, can be frustrated by the established order. Discourses or legal norms become emancipatory when offer the indigenous community a mean for protecting its expectations, its idea over territory, its relationship with nature, and its distinctive cosmovision.

¹⁶² Boaventura Santos de Sousa, *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition* (New York, London : Routledge, 1995).

Chapter 2 Biodiversity Discourse: the Dominant Model in Conservation

The literature dealing with biodiversity as the product of social economic and cultural forces, stresses the paramount role of conservationists, mostly biologists, in the creation of biodiversity as a new idea that defines and redefines meanings.¹⁶³ This literature considers the environmental concerns as the product of a process of claims-making in which particular social actors promote views which are contested by other social actors.¹⁶⁴ Since its origin, biodiversity has been object of several developments, re-imaginings and constructions.

As a scientific object, a review of relevant works shows that the concept of biological diversity lacks both a universal definition and an established scientific unit of measurement. A large number of scientific papers are still dealing with these two lacunae.¹⁶⁵ On this matter, a commentator argues that the definition of biodiversity depends on the methods that are applied and the objects that are prioritized in a certain project.¹⁶⁶ However, the hazy definition and the lack of universal units of measurement are in part what made the fortune of biodiversity, allowing it to hybridize the social field. In fact, the popularity of this term is due to the appearance of biodiversity at the intersection of the scientific, political and social fields. In this regard, biologists played a

¹⁶³ Among others see: A Escobar, "Whose Knowledge Whose Nature? Biodiversity Conservation and the Political Ecology of Social Movements," *Journal of Political Ecology*, 1998; Yrjö Haila and Jari Kouki, "The Phenomenon of Biodiversity in Conservation Biology," *Annales Zoologici Fennici*, 1994; Arturo Escobar, "Construction Nature: Political Elements for a Post-Structuralist Ecology," *Futures* 28, no. 4 (1996): 325–43; Keith H. Hirokawa and Rik Scarce, "Nature in a Constructed World: Grounding the Constructivist Method," in *Environmental Law and Contrasting Ideas of Nature A Constructivist Approach*, ed. Keith H. Hirokawa, 2014; Ben Minteer A. and Robert Manning E., eds., *Manning Reconstructing Conservation: Finding Common Ground* (Island Press, 2003).

¹⁶⁴ John A Hannigan, *Hannigan JA Environmental Sociology. A Social Constructionist Perspective* (London: Routledge, 1995).

¹⁶⁵ For an overview of this debate see: DeLong, "Defining Biodiversity"; Sahotra Sarkar, "Defining Biodiversity; Assessing Biodiversity," *Monis*, 2002; Sylvain Meinard, Yves, Coq, "A Constructivist Approach toward a General Definition of Biodiversity," *Ethics, Policy & Environment* 17, no. 1 (2014): 88–104. This aspect is also addressed in the book *Biodiversity II*, in which Reaka-Kudla, Marjorie points out "So what is it? Biologists are inclined to agree that it is, in one sense, everything. Biodiversity is defined as all hereditarily based variation at all levels of organization, from the genes within a single local population or species, to the species composing all or part of a local community, and finally to the communities themselves that compose the living parts of the multifarious ecosystems of the world. The key to the effective analysis of biodiversity is the precise definition of each level of organization when it is being addressed." Edward O. Reaka-Kudla, Marjorie, Wilson, Don E., Wilson, ed., *Biodiversity II: Understanding and Protecting Our Biological Resources* (Joseph Henry Press, 1996).

¹⁶⁶ Philipp Mayer, "Biodiversity—the Appreciation of Different Thought Styles and Values Helps to Clarify the Term," *Restoration Ecology* 14, no. 1 (2006): 105–11.

major role in constructing the idea of biodiversity at the intersection of the political and scientific fields.

The National Forum on BioDiversity is considered a central event in this process of claims-making that led to articulate biodiversity as a new discourse on conservation.¹⁶⁷ The National Forum, held in Washington D.C. in 1986, was organized by leading American biologists in order to advocate before policy makers and the media for the value of biodiversity as a threatened resource.¹⁶⁸ In this occasion, the biologist Walter G. Rosen coined the neologism biodiversity. Even if this term was criticized as ‘too glitzy’ eventually, the glitziness of this word fostered its popularity,¹⁶⁹ in particular by penetrating the debate in international political fora and social media.

David Takacs’ book: “The idea of biodiversity: philosophies of paradise”, is a pioneering work to understand the role of biologists in the formulation of biodiversity as new discourse and its penetration in the political and social arena. The author, based on several interviews to key participants at the Forum,¹⁷⁰ concludes that the idea of biodiversity was launched to serve the advocacy purpose of a group of conservationists, mostly biologists.¹⁷¹ The latter built their object of ecological concern in order to influence the way the general public and policy-makers see nature. In this circumstance, as Takas points out, biologists evolved from being laboratory practitioners who discovered natural objects, into partisans for biodiversity; and he concludes: “[t]he term biodiversity is a tool for a zealous defense of a particular social construction of nature.”¹⁷²

In order to describe the core pillars of biodiversity as dominant paradigm in conservation, in the following sections, I analyze papers produced during the Forum, following meetings,¹⁷³ and by the prominent scholarship belonging to the new discipline

¹⁶⁷ Yrjö Haila, “Biodiversity and the Divide between Culture and Nature,” *Biodiversity and Conservation* 8, no. 1 (1999): 165–81.

¹⁶⁸ Takacs, *The Idea of Biodiversity: Philosophies of Paradise*; Walter G Rosen, “What’s in a Name? The Idea of Biodiversity: Philosophies of Paradise David Takacs,” 1997; Edward O. Wilson, *Biodiversity* (Washington, DC: National Academy of Science Press, n.d.).

¹⁶⁹ Takacs, *The Idea of Biodiversity: Philosophies of Paradise*.

¹⁷⁰ Takacs’s work was based on 23 interviews to key biologists who participated at the National Forum on BioDiversity and fundamentally contributed to shaping this new discourse. Among others: Paul Ehrlich, Thomas Lovejoy, Walter G. Rosen, Michael Soule and Edward O. Wilson.

¹⁷¹ Takacs.

¹⁷² David Takacs, *The Idea of Biodiversity: Philosophies of Paradise* (Johns Hopkins University Press, 1996), p.1

¹⁷³ The book titled ‘Biodiversity’ and edited by O Wilson is an important tool to investigate into the construction of biodiversity as a new discourse. The book contains the papers presented at the Forum;

of conservation biology.¹⁷⁴ Furthermore, I will use documents issued by the international agencies that influence the design of conservation strategies.¹⁷⁵

The analysis of these materials shows that biodiversity discourse arises in two important narratives: biodiversity as a threatened resource that requires prompt interventions and solutions, and biodiversity as a valuable market good. This latter aspect needs to be considered in the framework of the application of new genetic technologies to conservation studies. This new practice, supported by the legal framework, has extended the marketability of ‘new discovered’ natural components, creating new market economy, the so-called green economy. In this regard, the Intellectual Property Law (IPL) on plants, Genetic Resources (GRs) and Traditional Knowledge (TK) have helped in transforming some components of the nature in commercial valuable goods. In addition, the new international environmental legal framework has promoted the commodification of the relationship between nature and human beings in the form of services, for instance: REDD+, Payments for Ecosystem Services (PES).

2.1 Biodiversity as a Threatened Resource and the New Dimension of Nature

Scientists, particularly conservation biologists, have played a major role in the construction of biodiversity as a new environmental problem and a new object of conservation, in particular by linking it to the idea of the extinction crisis.¹⁷⁶ This latter is based on a new narrative on the interrelation between human beings and nature,¹⁷⁷ in

therefore, it is a prime source to analyze the genesis of biodiversity as a new object of scientific and social attention. The book ‘Biodiversity II’ is another paramount source. It is the second effort to systematize the current debate on biodiversity.

¹⁷⁴ For an overview of the existing literature on biodiversity see: Charles Smith, *Biodiversity Studies: A Bibliographic Review* (The Scarecrow Press, 2000).

¹⁷⁵ I will use the documents adopted by World Resources Institute (WRI); World Conservation Union (IUCN); United Nation Environmental Programme (UNEP); Food and Agriculture Organization (FAO); United Nations Education, Scientific and Cultural Organization (UNESCO); and World Wildlife Fund (WWF).

¹⁷⁶ Fred Van Dyke, *Conservation Biology: Foundations, Concepts, Applications* (Springer Science & Business Media, 2008).

¹⁷⁷ In the 1970s, several pioneering studies investigated the scarcity of the world resources and the adverse impact of human activities on the planet. Among others see: Rachel Carson, *Silent Spring* (Houghton Mifflin Harcourt, 2002); J.Barnett Harold and Chandler Morse, *Scarcity and Growth: The Economics of Natural Resource Availability*, 3rd ed. (Routledge, 2013); Stewart L. Udall, *The Quiet Crisis* (New York: Holt, Rinehart and Winston, 1963); Lynn White Jr., “The Historical Roots of Our Ecological Crisis,” in

which human activities are seen as potential causes of disruption of the ecosystem process. The scientific support to sustain this new strain of argument came from studies, conducted mostly in the Amazon forests, that showed an unprecedented environmental degradation and high rates of deforestation, desertification, and destruction occurred under human encroachment.¹⁷⁸

The extinction crisis also brings a new understanding of the forces that underline the current ecological crisis. This crisis is caused by fundamental disruptions of ecosystem processes, and not by the simple disappearance of single species. Therefore, this new approach has created an urgency to develop an alternative concept to that of ‘endangered species’ that had led the conservation studies in the previous phase.¹⁷⁹ Consequently, biodiversity has become the new form of conceptualized nature in conservation studies.¹⁸⁰ In this context, nature is not limited to species, but also to other elements such as ecosystems and gene varieties.¹⁸¹

In a landmark publication, Michael Soule describes the relevant role that the idea of extinction crisis has had in the affirmation of the conservation biology¹⁸² as a new discipline, as well as in a new engagement of biologists in finding solutions to the environmental crisis. Conservation biology has emerged as a mission-oriented or crisis-oriented discipline, with the scope to cope with the deterioration of nature as a result of human activities.¹⁸³ Being a normative discipline,¹⁸⁴ biologists present themselves as

This Sacred Earth: Religion, Nature, Environment, ed. Roger Gottlieb (New York: Routledge, 1996); Paul Ehrlich, *The Population Bomb*, 1968 (New York: Ballantine, n.d.); Donella H. Meadows et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972); Barry Commoner, *The Closing Circle: Confronting the Environmental Crisis* (London: Cape, 1972); Garrett Hardin, “The Tragedy of the Commons,” *Science*, 1968.

¹⁷⁸ Van Dyke, *Conservation Biology: Foundations, Concepts, Applications*; Wilson, *Biodiversity*. World Resources Institute, International Union for Conservation of Nature, and Natural Resources. *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*. World Resources Institute, 1992.

¹⁷⁹ Van Dyke, *Conservation Biology: Foundations, Concepts, Applications*.

¹⁸⁰ Fred Van Dyke, *Conservation Biology: Foundations, Concepts, Applications* (Springer Science & Business Media, 2008).

¹⁸¹ Even if the definition of biological diversity is still controversial and not universal, the Convention of Biological Diversity offers a well-accepted definition of this term. In this regard, Article 2 reads: “‘Biological diversity’ means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”

¹⁸² In 1985, a group of biologists founded the Society for Conservation Biology, giving the birth to a new discipline and field of study: the conservation biology.

¹⁸³ Michael E. Soule and Bruce A. Wilcox, *Conservation Biology: An Evolutionary-Ecological Perspective* (Sinauer Associates, 1980).

possible ‘savers’ before the imminent ecological catastrophe. This latter, also, justifies their involvement in the political arena, and the need for promoting urgent interventions.

The urgency has also justified the promotion of biodiversity as a new scientific object of attention, despite the lack of a definitive agreement on its definition and a well-accepted and shared methodology. In this regard, Soule argues that if the humankind had contributed to the destruction of the planet, biologists can reverse or mitigate these effects. In doing so, biologists need to involve themselves in politics and advocacy.

It is, however, within our capacity to modify significantly the rate at which biotic diversity is destroyed, and small changes in rates can produce large effects over long periods of time. Biologists can help increase the efficacy of wildland management; biologists can improve the survival odds of species in jeopardy; biologists can help mitigate technological impacts. The intellectual challenges are fascinating, the opportunities plentiful, and the results can be personally gratifying.¹⁸⁵

On this point, the formulation of biodiversity as threatened resource has been a key aspect for the promotion of the biologists’ advocacy project during the 1986 National Forum on BioDiversity¹⁸⁶ and in future meetings and publications.¹⁸⁷ As Wilson explains: the need for a conservation policy on biodiversity lays on “the urgent warning that we are rapidly altering and destroying the environments that have fostered the diversity of life forms for more than a billion years.”¹⁸⁸

Before describing the other narrative based on the economic values of biodiversity promoted in the Forum, I need to briefly illustrate the role of new technologies in the construction of the idea of nature underling biodiversity. New technologies, applied to conservation studies, have played a paramount role in constructing biodiversity discourse.¹⁸⁹ In this regard, a consistent literature argues that genetic technologies have contributed in shaping the idea of nature underling

¹⁸⁴ Reed Noss, “Is There a Special Conservation Biology?,” *Ecography* 22, No. 2 22, no. 2 (1999).

¹⁸⁵ Michael E. Soulé, “What Is Conservation Biology?,” *BioScience* 35, no. 11 (1985): 727–34.

¹⁸⁶ Takacs, *The Idea of Biodiversity: Philosophies of Paradise*; Rosen, “What’s in a Name? The Idea of Biodiversity: Philosophies of Paradise David Takacs”; Wilson, *Biodiversity*.

¹⁸⁷ Haila, “Biodiversity and the Divide between Culture and Nature.”

¹⁸⁸ Wilson, *Biodiversity*.

¹⁸⁹ Alexej Ghilarov, “What Does ‘biodiversity’ mean—scientific Problem or Convenient Myth?,” *Trends in Ecology & Evolution* 11, no. 7 (1996).

biodiversity.¹⁹⁰ The affirmation of the genetic technologies has two effects on conservation studies: on one hand the application of the evolutionary approach at the micro level to understand biological processes and on the other hand the use of the market opportunities offered by the biotechnologies to raise an argument in favor of the compatibility of the conservation of biodiversity with the economic development.¹⁹¹

The new genetic technologies allows to focus on the micro level- organisms, DNA and gene varieties-, and promote a genocentric approach to biodiversity.¹⁹² The use of molecular data in evolutionary biology and ecology is fundamental to understand the process behind the biological diversity and differences in DNA sequences become a measurement of the diversity.¹⁹³ In this regard, the diversity in microorganisms guarantees the efficient functioning of the ecosystem¹⁹⁴ within a scientific framework that revitalize the Darwinism approach.¹⁹⁵ In this context, genetic diversity, DNA variations and adaptive responses become fundamental topics in the scientific debate on biodiversity.¹⁹⁶ This genocentric view leads Escobar to conclude that:

[...] although biodiversity is seen as encompassing more than genes, the recognition of its genetic foundation suggests that it is in genes, not in the complex biological and cultural processes that account for particular

¹⁹⁰ Ibid.; Escobar, "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements," 1998; Cori Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton University Press, 2003).

¹⁹¹ Rita R. Colwell, "Microbial Biodiversity and Biotechnology," in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Washington, DC : Joseph Henry Press, 1996); Patrick Ruth, "Biodiversity: Why Is It Important?," in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Joseph Henry Press, 1996); Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson, "Santa Rosalia, The Turnong of the Century, and a New Age of Exploitation," in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Joseph Henry Press, 1996).

¹⁹² Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Duke University Press, 2008). p. 139-140.

¹⁹³ Martin William and Francesco Salamini, "A Meeting at the Gene," *EMBO Reports* 1, no. 3 (2000): 208–10. See also: C. J. Butt et al., "The Impact of Rapid Gene Discovery Technology on Studies of Evolution and Biodiversity," in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Washington, DC: Joseph Henry Press, 1997).

¹⁹⁴ Ruth, "Biodiversity: Why Is It Important?" p. 13.

¹⁹⁵ Otto Thomas Solbrig, "Biodiversity: An Introduction," in *Biodiversity and Global Change*, ed. Otto Thomas Solbrig, H. M. Van Emden, and P. G. W. J. Van Oordt (Cab international, 1994).

¹⁹⁶ Jean-Claude Mounolou, "Biodiversity at the Molecular Level," in *Biodiversity and Global Change*, ed. Otto Thomas Solbrig, H. M. V an Emden, and P. G. W. J. Van Oordt. (Cab international, 1994); Wilke van Delden, "Genetic Diversity and Its Role in the Survival of Species," in *Biodiversity and Global Change*, ed. Otto Thomas Solbrig, H. M. Van Emden, and P. G. W. J. Van Oordt (Cab international, 1994).

biodiverse worlds, where ultimately "the key to the survival of life on earth" (a common phrase in the conservation trade) is supposed to reside.¹⁹⁷

The application of micro-level technologies has created GRs as a new object of conservation that with species and ecosystems becomes the central focus for the development of conservation policy. As described above, biologists have constructed biodiversity as threatened resource; however, this narrative was not a sufficient argument to attract the attention of policy makers, in particular in the North. For this reason, the American biologists promoted a narrative on the economic potential values of biodiversity. This narrative was in part possible due to the affirmation of a market for biotechnology. The extension of the application of the intellectual property rights to living organisms was the main incentives for the creation of this new market.

2.2 Biodiversity as Marketable Goods

The construction of the biodiversity as economic valuable object is the other main argument used to transform biodiversity in a political concern.¹⁹⁸ At the Forum, the participants lunched a 'utilitarian view' on the value of the biodiversity, linking it to the economic market and promoting an idea of conservation through market incentives.¹⁹⁹ As one of the participant at the Forum argues:

[i]n the developing world, as well as in our overdeveloped world, we are obligated to present economic, utilitarian arguments to preserve the biological

¹⁹⁷ Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Duke University Press, 2008), p. 140.

¹⁹⁸ On the economic use of tropical forest see: *Research Priorities in Tropical Biology* (NRC, 1980), based on a study of the National Research Council; *Technologies to Sustain Tropical Forest Resources* (OTA, 1984), prepared by the Office of Technology Assessment for the U.S. Congress; and the U.S. Strategy on *the Conservation of Biological Diversity; Tropical Forests: A Call for Action*. This report links deforestation to poverty and calls upon state and international organizations to intervene to alleviate poverty.

¹⁹⁹ In this regard, the market is the only agent that can offer incentives for conservation. In particular, the neoliberal economic system can transform 'nature' in potential marketable goods. On this point, there exists a vast literature, among others see: Ed Brown et al., "Green Growth or Ecological Commodification: Debating the Green Economy in the Global South," *Geografiska Annaler: Series B Human Geography* 96, no. 3 (2014): 245–59; Joshua Bishop and Chloe Hill, eds., *Global Biodiversity Finance: The Case for International Payments for Ecosystem Services* (Edward Elgar Publishing, 2014).

diversity that ultimately benefits us all....[as other alternative philosophical foundation] won't fly on the agricultural frontier of the Third World or in the board rooms of the Inter-American Development Bank.... But in the meantime, if we want to hold on to our planet's biological diversity, we have to speak the vernacular. And the vernacular is utility, economics, and the well-being of individual human beings.²⁰⁰

As Wilson illustrates: “[i]t is equally true that knowledge of biological diversity will mean little to the vast bulk of humanity unless the motivation exists to use it. Fortunately, both scientists and environmental policy makers have established a solid linkage between economic development and conservation.”²⁰¹

The application of genetic technologies, as well as the emergence of a new biotechnology market were fundamental to build the discourse on the values of biodiversity during the National Forum and in the following publications. Due to the development of biotechnologies, publications stress that genetic diversity is a relevant resource for several markets such as food, agriculture, cosmetics, and biomedical industries.²⁰² In particular, biologists used the discourse on the market opportunities linked to biotechnologies as leverage to advocate for the protection of biodiversity. On this point, during the Forum biodiversity is presented as: “a precious ‘genetic library’ maintained by natural ecosystems.”²⁰³

Another narrative that emerges during the Forum, concerns the potential values of the ecological services. As Wilson and Erlich point out, linked to the idea of biodiversity “is the array of essential services provided by natural ecosystems, of which diverse species are the key working parts. Ecosystem services include maintenance of the gaseous composition of the atmosphere.”²⁰⁴ In this strain of argument, nature is presented

²⁰⁰ James D. Nations, “Deep Ecology Meets The Developing World,” in *Biodiversity*, ed. Edward O. Wilson and Frances M. Peter (Washington, DC: National Academy Press, 1990). p. 80.

²⁰¹ Wilson, *Biodiversity*. p. 14.

²⁰² For an overview of the new business brought about by biotechnology and more in general biodiversity discourse see: Ten Kate Kerry and Sarah A. Laird, *Ten Kate, Kerry, and Sarah A. Laird. The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit-Sharing* (Earthscan, 1999); Ten Kate Kerry and Sarah A. Laird, “Biodiversity and Business: Coming to Terms with the ‘grand Bargain,’” *International Affairs* 76, no. 2 (2000): 241–64; S.A. Laird and R.P. Wynberg, *Laird, S.A. and R.P. Wynberg. 2013. Bioscience at a Crossroads: Access and Benefit Sharing in a Time of Scientific, Technological and Industry Change* (Secretariat of the Convention on Biological Diversity, 2013).

²⁰³ Paul R. Ehrlich and Edward O. Wilson, “Biodiversity Studies: Science and Policy,” *1991* 253, no. 5021 (n.d.). p. 760.

²⁰⁴ *Ivi*.

as providers of ‘services’ for human beings, -such as: water filtration, control of rainfall, kept of temperature, and indicators of ecological changes.²⁰⁵

The conceptualization of nature as a reservoir of GRs and providers of ecological services, gave impetus to promotion of new forms of capitalization of natural components. As the next section will illustrate, biodiversity discourse is compared to sustainable development. This latter became an important new field of development for the capitalistic economy in the era of ecological crisis, in which, human activities are conceived as having a destructive impact on raw materials. In this regard, the new conceptualization of nature as a reservoir of GRs and provider of services, promote a form of conservation –biodiversity- that moves parallel with economic incentives offered by the market- PES, certifications for capture of CO₂, patents on GRs, ecotourism opportunities.

2.3 Idea of Nature and Development in the Biodiversity Discourse

Biodiversity is linked to the promotion of a certain idea of development, alternative to the industrial one. Industrial development promoted the idea of the abundance of natural resources and the enlightenment faith in historical progress and humankind’s dominance of nature. Prominent biologists present the biotechnologies and environmental services market as a new form of development compatible with the environmental crisis- resource scarcity and adverse human activity impacts.²⁰⁶ Therefore, biodiversity conservation became a prominent aspect of the debate on sustainable development.²⁰⁷

In this regard, the 1992 *Global Biodiversity Strategy* stressed that biodiversity conservation supports sustainable development by protecting and using biological

²⁰⁵ Thomas E. Lovejoy, “Biodiversity: What Is It?,” in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Joseph Henry Press, 1996).

²⁰⁶ Ibid., p.13. Rita R. Colwell, “Microbial Biodiversity and Biotechnology,” in *Biodiversity II: Understanding and Protecting Our Biological Resources*, ed. Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson (Washington, DC : Joseph Henry Press, 1996).

²⁰⁷ For an overview on the origin of the sustainable development see: World Commission on Environment and Development, *Report: Our Common Future*, United Nation Secretary General, “Development and International Co-operation: Environment”, A/42/427, 4 August, 1987.

resources without diminishing the universe of genes and species and without destroying habitats and ecosystems.²⁰⁸ This aspect is also promoted in the *2030 Agenda for Sustainable Development*. In detail, Goal 15 calls for the conservation of biological diversity as an incentive for sustainable development.²⁰⁹

On this matter, some authors consider biodiversity as central term in the debate on the conceptualization of sustainable development and its impact on issues such as: construction of groups' identity, and collective/cultural rights vis-a-vis the economic system.²¹⁰ According to this literature, sustainable development is founded on a new conception of the relationship among nature, human beings and markets.

As described above, biodiversity discourse promotes a new form of appropriation of nature through genetic technologies. In this regard, biodiversity can be seen as a "scientized synonym for nature"²¹¹ that allows for the appropriation of nature through genetic technologies. The application of these technologies to conservation has led to the creation and promotion of new economic objects-e.g. genetic resources- as an alternative to the industrial development. In other words, biodiversity paradigm in conservation promotes a new way of exploitation of natural resources. As Hayden argues: "[u]nlike 'wildness'²¹²... biodiversity is a kind of nature that seems more explicitly compatible with ideas of industrial and economic management and intervention."²¹³

In this regard, Escobar points out that, due to the strong connection of biodiversity with the narrative on the potential marketability of genetic resources, biodiversity

²⁰⁸ World Resources Institute, International Union for Conservation of Nature, and Natural Resources. *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*. World Resources Institute, 1992, p.19. The link between biodiversity and sustainable development is also made in the document: Munro, David A., and Martin W. Holdgate, eds. *Caring for the earth: a strategy for sustainable living*. Gland: IUCN/UNEP/WWF, 1991.

²⁰⁹ General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1, 21 October 2015.

²¹⁰ Arun Agrawal, *Environmentality, Technologies of Government and the Making of Subjects* (Durham, N.C.: Duke University Press, 2005); Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Duke University Press, 2008); Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*; Kathleen McAfee, "Selling Nature to Save It? Biodiversity and Green Developmentalism," *Environment and Planning D: Society and Space*, 1999.

²¹¹ Takacs, *The Idea of Biodiversity: Philosophies of Paradise*. p. 106.

²¹² The wilderness discourse informed conservation strategies before the emergence of the idea of biodiversity. On this point, a vast literature, for an overview see: Michael P. Nelson and Baird J. Callicott, eds., *The Wilderness Debate Rages on: Continuing the Great New Wilderness Debate* (University of Georgia Press, 2008).

²¹³ Cori Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton University Press, 2003), p. 52.

discourse promotes a new form of capital: the ecological capital.²¹⁴ In this paradigm, there is a new process of capitalization of the nature, in which conservation becomes a fundamental element. In this articulation, nature is not just a raw material but also a reservoir of value that research and knowledge can transform in capital.²¹⁵ Furthermore, nature is also a provider of services, transforming ecosystems in economic valuable goods.

Escobar explains the process of ‘capitalization of nature’ under the biodiversity paradigm relies on Martin O’ Connor’s idea of semiotic conquest.²¹⁶ This idea is used to show how elements which, before were not contemplated as capital, are now part of it. On this point, under the biodiversity discourse that constructs nature as a reservoir of genetic resources and promotes the bioprospecting and biotechnology market, gens fell under the process of production, becoming tradable goods.²¹⁷ The same occurred for the ecological services through economic incentives to promote conservation such as PES, certificate for the CO₂ sequestration, cultural service in the form of ecotourism.

Core international environmental agencies promote these tools to achieve conservation of biodiversity while perusing economic growth.²¹⁸ Kathleen McAfee describes this new way of appropriation of nature by the market as post-neoliberal environmental-economic paradigm.²¹⁹ In this context, “nature is constructed as a world currency and ecosystems are recoded as warehouses of genetic resources for biotechnology industries.”²²⁰ Furthermore, as authors belonging to STS argue, the biotechnology allows humans to play with unprecedented combinations of the natural and

²¹⁴ Arturo Escobar, *Encountering Development. The Making and Unmaking of the Thrid World, The Making and Unmaking of the Third World*, 1995.

²¹⁵ Ibid.

²¹⁶ Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Duke University Press, 2008).

²¹⁷ Ibid.

²¹⁸ In this regard see: UNEP, Conference of The Parties to the Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets*, UNEP/CBD/COP/DEC/X/229 October 2010; Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 4*, Montréal, 2014. UN-REDD Programme Strategy 2016–2020. Convention’s work on economic, trade and incentive measures, the study on The Economics of Ecosystems and Biodiversity (TEEB), the United Nations System of Integrated Economic and Environmental Accounts (SEEA),

²¹⁹ McAfee, “Selling Nature to Save It? Biodiversity and Green Developmentalism.”

²²⁰ Kathleen McAfee, “Selling Nature to Save It? Biodiversity and Green Developmentalism,” *Environment and Planning D: Society and Space*, 1999. p. 133.

the artificial.²²¹ Therefore, nature is constantly reinvented and, as in the case of the biodiversity, transformed in a ‘sustainable’ market object.²²²

In this context, Enrique Leff speaks about a ‘geopolitics of sustainability’.²²³ According to the author:

Esta nueva geopolítica de la sustentabilidad se configura en el contexto de una globalización económica que, al tiempo que lleva a la desnaturalización de la naturaleza, promueve con el discurso del desarrollo sostenible una estrategia de apropiación que busca “naturalizar” la mercantilización de la naturaleza. En esa perversión de “lo natural” se juegan las controversias entre la economización de la naturaleza y la ecologización de la economía.²²⁴

Once conceptualized the nature as ecological capital, another important pillar of biodiversity discourse is the management and organization of the territory in order to guarantee the conservation of this potential capital for the market and economic use of natural components.

2.4 Planning and Management of the Territory

Under biodiversity discourse, the management and the planning of natural resources become fundamental to achieve conservation goals. International agencies promote the implementation of Protected Areas (PAs) and the planning/zoning system.²²⁵ International agencies, such as the International Union for Conservation (IUNC), have

²²¹ On this point: Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Women* (London and New York: Routledge, 1991).

²²² Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World, The Making and Unmaking of the Third World*, 1995.

²²³ Enrique Leff, “La Geopolítica de La Biodiversidad Y El Desarrollo Sustentable,” *Revista Del Observatorio Social de América Latina* 17 (2005); Enrique Leff, *Racionalidad Ambiental: La Reapropiación de La Naturaleza, La Reapropiación Social de La Naturaleza*, 2004.

²²⁴ “The new geopolitics of sustainability is configured in the context of the economic globalization. The latter denaturalizes the nature while promotes a discourse on sustainable development that consists in a new strategy to appropriate the nature. This strategy naturalizes the commodification of nature. In this perversion, the concept of ‘nature’ hidden a conflict between the commodification of nature and the ecologization of the economy.” (My translation). Enrique Leff, “La Geopolítica de La Biodiversidad Y El Desarrollo Sustentable,” *Revista Del Observatorio Social de América Latina* 17 (2005). p. 2.

²²⁵ For an overview see: Barbara J. Lausche and Françoise Burhenne-Guilmin, *Guidelines for Protected Areas Legislation*, 81st ed. (IUCN, 2011).

played a fundamental role in promoting PAs at domestic level. In this regard, as the *Global Biodiversity Strategy* explains, PAs are an essential tool for saving biodiversity.²²⁶

PAs for conservation are different from wilderness areas. The latter are represented as areas untouched by human activities or that should be preserved without human interference. On the contrary, the system of PAs promotes a kind of conservation that integrates specific human activities and promotes a specific managing and zoning regime.

As described in action 58 of the *Global Biodiversity Strategy*, the promotion of an efficient management regime can strengthen the potential of PAs for the conservation of biodiversity. In this regard, the repartition of the PA in zones devoted to specific activities allows for the achievement of an effective management of the area.²²⁷ On this point, the *Global Biodiversity Strategy* suggests to promote certain activities at the detriment of others. In detail, it supports scientific research, inventories of species, bioprospection of GRs, and ecotourism and excludes agriculture, considered having a negative impact on conservation.²²⁸

The IUCN has promoted several categories of PAs that do not exclude human activities.²²⁹ As Alexander Gillespie explains, the IUCN system of classification of PAs is based on the degree of interaction between nature and human beings.²³⁰ In detail, PAs range from those that allow limited human activities to those that allow extraction of natural resources.

The planning system is one of the core instrument promoted under the biodiversity paradigm in conservation. This tool guarantees that each biodiversity hotspot is used and managed according to the government strategy on conservation. As the *Global*

²²⁶ World Resources Institute, International Union for Conservation of Nature, and Natural Resources. *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*, p.117.

²²⁷ *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*, Action 58. Several international bodies and documents have endorsed the system planning; on this matter see: art. 8(a) CBD; 2003 Durban World Parks Congress 2004. For an overview see: Barbara J. Lausche and Françoise Burhenne-Guilmin, *Guidelines for Protected Areas Legislation*, 81st ed. (IUCN, 2011).

²²⁸ *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*, action 60.

²²⁹ For an exhaustive list see: Alexander Gillespie, *Conservation, Biodiversity and International Law* (Edward Elgar Publishing, 2013).

²³⁰ *Ibid.*

Biodiversity Strategy points out, the planning system should also be implemented outside PAs.²³¹

Concerning the relationship with indigenous peoples, the majority of biodiversity hotspots are located in indigenous territories; therefore, a fundamental characteristic of a biodiversity discourse has been the incorporation of local communities into the management of PAs and, more in general, in the process of biological conservation. This is one of the main treat that distinguishes biodiversity paradigm from the previous system of conservation based on natural parks and the idea of wilderness.²³²

As some authors argue, capitalism and economic market have shaped conservation practices under biodiversity discourse.²³³ As extensively debated in Section 2.3, biodiversity discourse bears a specific idea of sustainable development, in which nature is constructed as an economic component.²³⁴ Within this framework, Elinor Ostrom's economic theory of the commons has offered a rationale to recognize a role of indigenous communities into the management of biological diversity.²³⁵ According to her theory, indigenous institutions can efficiently achieve a sustainable and economic efficient management of common resources.²³⁶ Previously, under Hardin's theory of 'the tragedy of the commons', only public and private institutions were considered capable of guaranteeing an efficient management of common resources.²³⁷ Starting from this new idea, the World Bank (WB) policy has considered indigenous communities as social

²³¹ *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*, Action 59.

²³² For an overview on the evolution of the conservation strategies see: Dan Brockington, Rosaleen Duffy, and Jim Igoe, eds., *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas* (Earthscan, 2008); Fred Van Dyke, *Conservation Biology: Foundations, Concepts, Applications* (Springer Science & Business Media, 2008).

²³³ Brockington, Duffy, and Igoe, *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas*; Nail Harvey, "El Capitalismo Ecológico Y El Plan Puebla-Panamá: La Transformación de Los Recursos Naturales En Mesoamérica," *Comercio Exterior* 54, no. 4 (2004): 319–27; Arturo Escobar, *Territories of Difference: Place, Movements, Life, Redes* (Duke University Press, 2008); Kathleen McAfee, "Selling Nature to Save It? Biodiversity and Green Developmentalism," *Environment and Planning D: Society and Space*, 1999.

²³⁴ On the link between PAs regime and sustainable development see: the Rio Declaration on Environment and Development, 3-14 June 1992. United Nations, *Millennium Development Goals 2015*, Goal 7. For an overview see: Lausche and Burhenne-Guilmin, *Guidelines for Protected Areas Legislation*.

²³⁵ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, 1990).

²³⁶ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, 1990).

²³⁷ Hardin, "The Tragedy of the Commons."

capital (ethnic capital), whose institutions can favor the achievement of efficient sustainable economic development goals.

If under the previous regime of ‘wilderness and natural parks’ indigenous communities were dispossessed of their land, under the biodiversity discourse, indigenous communities are integrated into the conservation system. One example it is the promotion of voluntary protected areas in territory legally controlled by indigenous peoples. The IUCN has introduced this category of protected areas to integrate indigenous territories into the PAs regime.

The recognition of the indigenous community as a conservation management unit can be an important instrument for indigenous peoples to oppose modernization policies that jeopardize their cultural existence;²³⁸ however, biodiversity discourse unveils new forms of oppression and colonization. In this regard, scholars have pointed that the PAs regime and the planning system can be at odds with indigenous way of life.²³⁹ In this matter, Dan Brockington, Rosaleen Duffy, and Jim Igoe argue that the territorial planning imposed to maintain conservation could require significant changes in the lifestyle of local communities.²⁴⁰ In his analysis on the imposition of the PA zonification in the indigenous territory in the Philippine, Dario Novellino concludes that “the enactment of environmental laws is not much the product of a new political awareness but rather a cosmetic move to shift the terrain of discourse, so that national sovereignty becomes a forms of ‘caring for’ rather than ‘controlling’ indigenous communities and their natural resources.”²⁴¹

This new role of indigenous communities in conservation has led to new forms of essentialization of the indigenous identity, as well as new forms of inclusion and exclusion. As some authors have pointed out, this new approach to conservation can

²³⁸ Among others see: Dan Brockington, Rosaleen Duffy, and Jim Igoe, eds., *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas* (Earthscan, 2008).

²³⁹ Marcus Colchester, *Salvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation*, Vol. 55 (Diane Publishing, 1994); Andrew Gray, Helen Newing, and Alejandro Parellada, eds., *From Principles to Practice: Indigenous Peoples and Biodiversity Conservation in Latin America* (FPP, IWGIA, AIDESEP, 1999); Brockington, Duffy, and Igoe, *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas*.

²⁴⁰ Ibid.

²⁴¹ Dario Novellino, “Contrasting Landscapes, Conflicting Ontologies: Assessing Environmental Conservation on Palawan Island (the Philippines),” in *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*, ed. David G. Anderson and Eeva Berglund (New York, Oxford: Berghahn Books, 2003), 171–88., p. 183.

promote a view that indigenous communities are worthy of remaining on a landscape as long as they remain ecologically noble.²⁴² The impact of planning zone system on indigenous collective rights will be extensively analyzed in Chapters 6 and 7.

The following sections look closely at the interrelation between the legal field and the biodiversity discourse. Sections 2.5 and 2.6 introduce the readers to the translation of this paradigm into the legal framework and the implications for indigenous collective rights. In doing that, Section 2.5 will use the example of the Intellectual Property Rights Regime (IPR). Embracing the conative injustice prospective, I will show the epistemic conflict raised by the application of IPR to regulate the access and the use of GRs and TK as new objects of conservation. The IPR has played a paramount role in the construction of nature as a reservoir of value under biodiversity paradigm. In fact, allowing the patentability of living organisms, IPR has offered economic incentives to pursue this new ‘biodiversity market’.

2.5 Through the Cognitive Injustice Lens: Biodiversity and the Origin of New Legal Fields of Conflict

As extensively presented above, biodiversity bears a certain idea of nature, separate from the human beings. In this regard, nature becomes object of market through the commodification of some of its components -e.g., GRs and ecological services. This commodification occurs due to a legal framework that allows for patenting living organisms. Here, I am not offering a detailed presentation of the international regime of Intellectual Property Law (IPL) or any specific domestic regime, but I offer a brief analysis of the core traits of the IPL, mostly based on the international regime.²⁴³

²⁴² Dan Brockington, Rosaleen Duffy, and Jim Igoe, eds., *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas* (Earthscan, 2008); Kent H. Redford, “The Ecologically Noble Savage,” *Cultural Survival Quarterly* 15, no. 1 (1991): 46–48.

²⁴³ As some commentators agree, the international legislation on patenting of living organisms promoted by World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights agreement (TRIPS) mirrors the U.S legislation on this topic. As a brief background, in the 1930s the U.S, the E.U and the international legal system started recognizing the patentability of the phenotypes of plants and of other live organisms. A cornerstone moment in the patentability of living organism was the June 1980 U.S Supreme Court decision *Diamond v. Chakrabarty*. In this judgement, the Court clarified the controversial issue on the grant of patents on living organisms under U.S legal system – 35 U.S Code §101. In this decision, the Court declared that a life organism –an oil-eating bacterium–was patentable under the U.S

The legal regime of intellectual property has become more relevant for conservation under a biodiversity paradigm. In the late 1980's and early 1990's the patentability of living organisms has become a central topic in the debate on conservation of biodiversity due to the promotion by biologists of the bioprospection of GRs and more in general, biotechnology industries as a development activity compatible with the conservation of nature.²⁴⁴

Under biodiversity discourse, financial institutions,²⁴⁵ transnational corporations,²⁴⁶ and centers of research²⁴⁷ promote and develop programs on bioprospecting of GRs. Most of the biodiversity regions are located in the South and in territories inhabited by indigenous, minority and peasant communities. Consequently, bioprospecting of GRs has had a great impact on indigenous and local communities, raising new symbolic conflicts over natural resources. In this regard, the regulatory framework of the IPL, being expressive of a Western conceptualization of nature and the supremacy of the scientific epistemological system, has induced new symbolic conflicts over natural resources between the mainstream society and oppressed groups, including indigenous, minority, and peasant communities. Furthermore, the application of IPL at the local level has led to the affirmation of new juridical objects such as Traditional Ecological Knowledge (TEK).²⁴⁸ Relying on cognitive injustice framework the next section offers a brief overview of this new field of conflict.

legislation, regardless the lack of a legal expressed prevision. This sentence opened the path for extending the patent system to human manipulations of living organisms. This decision flipped in favor of the biotechnology industries and research centers.

²⁴⁴ Among other see: Edgar J. Asebey and Jill D. Kempenaar, "Biodiversity Prospecting: Fulfilling the Mandate of the Biodiversity Convention," *Vand. J. Transnat'l L.* 28 (1995): 703; Cori Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton University Press, 2003).

²⁴⁵ Among others see: projects under World Bank and GEF such as: Meso -American biological corridor; ICBG-Maya project.

²⁴⁶ For some examples on pharmaceutical corporations bioprospecting investments see: Daniel Robinson, *Confronting Biopiracy: Challenges, Cases and International Debates* (Routledge, 2010).

²⁴⁷ As Hayden shows in her book, universities and centers of research play a paramount role in bioprospecting activities. This occurs because they are the intermediary between the local level and the transnational corporations. Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*.

²⁴⁸ I am using TEK to describe the knowledge of indigenous, farmers and local groups over the use and management of genetic resources, agricultural techniques, and forest management. This allows me to distinguish the debate on TEK from the broader debate on TK. The latter concerns topics such as: patentability of traditional design, and artifacts. This topic is not object of this dissertation.

2.6 Intellectual Property Law: the Privilege of Modernity and the Exclusion of the 'Ecology of Knowledges'

The construction of nature as a reservoir of value under a biodiversity paradigm would not be possible without a legal framework that allows for patenting living organisms. In the 1930s, the U.S, the E.U and the international legal system²⁴⁹ started recognizing the patentability of the phenotypes of plants and of other live organisms.²⁵⁰ With the emergence of biodiversity discourse, the IPL has become the juridical tool for transforming natural components into market goods.²⁵¹ Since the 1990s, the IPL and the patentability of living organisms has become a central topic in the debate on accommodation of cultural diversity, self-determination, and cultural rights.²⁵²

The indigenous movement, in particular, has denounced the inadequacy of the IPL in regulating the use and access to GRs and TK vis -a -vis their cultural specificity.²⁵³

²⁴⁹ Among relevant legal acts see: Plant Patent Act 1930; European UPOV 1960s; Plant Variety Protection 1970. The 1930 Plant Patent Act recognized the patentability of certain asexually reproduced plants, and the 1970 Plant Variety Protection Act did the same for certain sexually reproduced plants.

²⁵⁰ Keith Aoki, *Seed Wars, Controversies and Cases on Plant Genetic Resources and Intellectual Property* (Carolina Academic Press, 2008).

²⁵¹ For an overview on this topic, among others see: Susette Biber-Klemm and Thomas Cottier, eds., *Rights to Plant Genetic Resources and Traditional Knowledge: Basic Issues and Perspectives* (CABI, n.d.); Patricia Lucia Cantuária. Marin, ed., *Providing Protection for Plant Genetic Resources* (The Hague, London, New York: Kluwer Law International, 2002); Natalie P. Stoianoff, ed., *Accessing Biological Resources Complaint with Convention on Biological Diversity* (The Hague, London, New York: Kluwer Law International, 2004); Muriel Lightbourne, *Food Security, Biological Diversity and Intellectual Property Rights* (Ashgate, 2009); Sarah A. Laird, ed., *Biodiversity and Traditional Knowledge: Equitable Partnerships in Practice* (London, Sterling, VA: Earthscan, 2002).

²⁵² On this point, there exists a vast literature: Rosemary J. Coombe, "Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity," *Indiana Journal of Global Legal Studies*, 1998, 59–115; Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*; Posey, Darrell A., Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities*.

²⁵³ *The Kari-Oca Declaration*, The World Conference of Indigenous Peoples on Territory, Environment and Development. Brazil, May 30, 1992; *The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*, Aotearoa New Zealand, 1993.; *Declaration of Indigenous People of the Western Hemisphere Opposing the Human Genome Diversity Project*, 1995; *The "Heart of the Peoples" Declaration*, From the North American Indigenous Peoples Summit on Biological Diversity and Biological Ethics, 1997; *The International Cancun Resolution of Indigenous Peoples* 5th WTO Ministerial Conference - Cancun, Quintana Roo, Mexico, 12 September 2003; *The Manukan Declaration of the Indigenous Women's Biodiversity Network Manukan*, Sabah, Malaysia, 4-5 February, 2004; *CBD's International Regime: Indigenous Activist Organizations Call for No Access Zones to Genetic Resources and Indigenous Knowledge*, Kuala Lumpur, Malaysia February 19, 2004; *Collective Statement of Indigenous Peoples on the Protection of Indigenous Knowledge*, UN Permanent Forum on Indigenous Issues, New York, May 12 2004; *Declaration on Indigenous Peoples' Rights to Genetic Resources and Indigenous Knowledge*

The indigenous movement and decolonial literature argue that the ethnocentric nature of the IPL has perpetuated new forms of colonization and oppression towards indigenous peoples. In fact, the IPL has supported the use and appropriation of GRs and TK by transnational corporations and centers of research without the consent of indigenous peoples and without regard for indigenous systems of customs and knowledge.²⁵⁴

Relying on the cognitive injustice framework, the IPL is a field of symbolic conflicts.²⁵⁵ As decolonial scholarship has developed, the IPL reflects Western legal subjectivity and view of nature that is incompatible with indigenous cosmovision and customary legal systems. In fact, IPL is built on a liberal and individual conceptualization of property that does not take into account the indigenous communal tenure system.²⁵⁶

Furthermore, the IPL embraces the privilege of modernity in defying TK and GRs, excluding indigenous epistemologies. In this regard, decolonial scholarship has accused IPL of bearing a specific idea of nature constructed in techno-economic terms (see Section 2.3).²⁵⁷ This idea of nature does not find correspondence in the indigenous cosmology and relationship with the environment.

According to some scholars who have navigated this topic, indigenous communities often treat natural constituencies as more than commodities, giving them cultural and symbolic meanings.²⁵⁸ In this regard, Tirso Gonzales speaks about a ‘culture

Convened at the Sixth Session of the United Nations Permanent Forum on Indigenous Issues, New York, May 14-25, 2007.

²⁵⁴ The literature qualifies this phenomenon as biopiracy. Among others see: Graham Dutfield, “A Critical Analysis of the Debate on Traditional Knowledge, Drug Discovery and Patent-Based Biopiracy,” *European Intellectual Property Review* 33, no. 4 (2011): 238–45; Mander, Jerry, *Paradigm Wars: Indigenous Peoples’ Resistance to Globalization*; Robinson, *Confronting Biopiracy: Challenges, Cases and International Debates*.

²⁵⁵ For an overview on this topic see: Miges Baumann et al., eds., *The Life Industry: Biodiversity, People and Profits*. London: Intermediate Technology Publications, 1996, (London: Intermediate Technology Publications, 1996).

²⁵⁶ Tania Bubela and E. Richard Gold, eds., *Genetic Resources and Traditional Knowledge: Case Studies and Conflicting Interests* (Edward Elgar Publishing, 2012); Johanna Gibson, *Community Resources* (Ashgate, 2005). See also: *The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*, Para. 2.5.

²⁵⁷ Stephen A. Apffel-Marglin, Frédérique Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996); Carl Wilmsen et al., eds., *Partnerships for Empowerment: Participatory Research for Community-Based Natural Resource Management* (Routledge, 2012); Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (Zed books, 1999); Laurelyn Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*, Cambridge University Press, 2009.

²⁵⁸ Among others see: Tirso Gonzales, “Sense of Place and Indigenous People’s Biodiversity Conservation in the Americas,” in *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of Biodiversity*, ed. Jenna Andrews-Swann Nazarea, Virginia D., Robert E. Rhoades (The University of

of seeds'. As the author explains, the 'culture of seeds' refers to specific "cosmological view and cognitive model, diverse technological strategies and ecosystems, agricultural systems, and substantially different type of social, religious and productive organizations and rituals."²⁵⁹ For instance, the Mexican indigenous traditional agricultural system of the *milpa*, can be described as a "cultural complex forms through ritual with the spiritual community of the deities and gods, the community of human beings, and the community of nature."²⁶⁰ Therefore, the disappearance of the *milpa* agricultural system can lead to a form of indigenous epistemicide.

Some authors argue that IPL can contribute to the indigenous epistemicide by perpetuating the privilege of modernity and disregarding the existence of other systems of knowledge.²⁶¹ Frederique Apffel-Marglin argues that the system of commodification of species -such as trees, seeds, and plants- based on their market values, adversely impacts on indigenous communities.²⁶² This system of commodification of nature creates hierarchies among natural components and, ultimately, among different economic systems. Consequently, it marginalizes those species that have no market value, leading to their disappearance under policies that support the conservation of species favored by the market.²⁶³ As a result, communities, for whom these planets, seeds, and trees have a social, economic, and cultural meaning, are adversely impacted. In some cases, the disappearance of these elements can jeopardize the existence of the indigenous community as a distinctive people, leading to the disappearance of their system of knowledge.

Arizona Press, 2013), 85–106; Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*; Winona LaDuke, *Recovering the Sacred: The Power of Naming and Claiming* (South End Press, 2005).

²⁵⁹ Tirso Gonzales, "Sense of Place and Indigenous People's Biodiversity Conservation in the Americas," in *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of Biodiversity*, ed. Jenna Andrews-Swann Nazarea, Virginia D., Robert E. Rhoades (The University of Arizona Press, 2013), 85–106., pp. 95-96.

²⁶⁰ Ibid., pp. 95-96.

²⁶¹ Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*; Mander, Jerry, *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*.

²⁶² Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*.

²⁶³ Stephen A. Apffel-Marglin, Frédérique, Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996).

Some authors have used the expression of *res nullius* (nobody's thing) to describe the exclusion from the Intellectual Property legal framework of indigenous system of knowledge, and cultural and social values that GRs have for indigenous peoples.²⁶⁴ In this sense, the lack of juridical recognition favors the misappropriation of indigenous resources in the same way that the concept of *terra nullius* has favored the dispossession of indigenous lands during the colonization period.²⁶⁵ In other words, different ways of representing, living, and caring for natural consistencies are excluded from the definition of the objects that deserve juridical protection under the IPR. Exclusion that favors the interests of economic entities –e.g., transnational corporations– at the detriment of the enjoyment indigenous collective rights– e.g., right to self-determination, rights to land and resources, right to culture.

Indigenous leaders and intellectuals have farther condemned IPL for its blindness to the cultural, economic, and spiritual values that natural consistencies have for indigenous peoples.²⁶⁶ In this matter, Winona LaDuke uses the American legal system's acceptance of genetic engineering and patenting of wild rice seeds to illustrate the misappropriation and misrepresentation of the cultural and spiritual values of the Anishinaabeg people in Minnesota.²⁶⁷ LaDuke shows the lack of recognition of Anishinaabeg peoples' cultural values of the wild rice in the process of genetic engineering and patenting of the seed of the rice. Particularly, she denounces the

²⁶⁴ Graham Dutfield, "The Public and Private Domains Intellectual Property Rights in Traditional Knowledge," *Science Communication* 21, no. 3 (2000): 274–95.

²⁶⁵ Posey Darrell, "Indigenous Ecological Knowledge," in *Paradigm Wars*, ed. Jerry Mander and Victoria Tauli-Corpuz, n.d.

²⁶⁶ Among others see: Debra Harry, *Biocolonialism*, Bioneers, <https://www.youtube.com/watch?v=xezo8kFd0DU>; Winona LaDuke, *Recovering the Sacred: The Power of Naming and Claiming* (South End Press, 2005); Marie Annette Jaimes Guerrero, "Biocolonialism and Isolates of Historic Interest," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, ed. Mary Riley, Altamira Press, 2004, 251:277; Maui Solomon, "Intellectual Property Rights and Indigenous Peoples' Rights and Responsibilities," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, ed. Mary Riley (Altamira Press, 2004), 221–50.

²⁶⁷ Winona LaDuke, *Recovering the Sacred: The Power of Naming and Claiming* (South End Press, 2005); Marie Annette Jaimes Guerrero, "Biocolonialism and Isolates of Historic Interest," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, ed. Mary Riley, Altamira Press, 2004, 251:277; Maui Solomon, "Intellectual Property Rights and Indigenous Peoples' Rights and Responsibilities," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, ed. Mary Riley (Altamira Press, 2004), 221–50. On the blindness of the U.S legal system for the cultural and spiritual value of the wild rice or the Ojibway people see also: Thomas Vennum, *Wild Rice and the Ojibway People* (Minnesota historical society Press, 1988).

privilege of the scientific system to manipulate seeds vis-à-vis Anishinaabeg peoples' centuries activities of caring for them.²⁶⁸

The author argues that scientific research ignores the interests of indigenous communities. Additionally, she stresses that the patent system excludes the indigenous worldview of ownership of plants, and that it is incapable of absorbing indigenous cultural and sacred values.²⁶⁹ Conventional legal risk assessments of Genetic Modify Organisms (GMOs) commercialization ignore the particular risks that these crops pose to indigenous communities. The author concludes that the genetic transformation of wild rice can jeopardize the cultural distinctiveness of the indigenous peoples whose social institutions are linked to the production this crop.²⁷⁰ In addition, scholars conclude that the privilege of positivist science in assessing the patentability of living organisms is one of the root causes of the phenomenon of the biopiracy.²⁷¹

Indigenous scholars advocate reforming the current IPR regime, which accords indigenous knowledge evidentiary value only if it can be translated into scientific terms and can meet scientific norms. Additionally they criticize the IPR because it does not embrace indigenous collective tenure system and customary law on use, access, and care for living organisms.

In this matter, Maui Solomon denounces the incommensurability of IPR regime with Maori cosmovision.²⁷² As the author points out, the capitalist idea of economy, which underpins the IPR, excludes the holistic relationship that the Maori have with nature. For the latter, this relationship cannot be reduced to economic appropriation, but it is based on the spiritual dimension of the universe, the respect for all living organisms, and the obligation of reciprocity.²⁷³ Therefore, the Maori approach to gene modification is not scientific, and is therefore excluded from New Zealand's IPR framework. Solomon

²⁶⁸ LaDuke, *Recovering the Sacred: The Power of Naming and Claiming*.

²⁶⁹ Ibid.

²⁷⁰ Winona LaDuke, *Recovering the Sacred: The Power of Naming and Claiming* (South End Press, 2005).

²⁷¹ Giulio Angioni, "Indigenous Knowledge: Subordination and Localism," in *Nature, Knowledge: Ethnoscience, Cognition, and Utility*, ed. Glauco Sanga and Gherardo Ortalli, Berghahn Books, 2003, 287–96; Roy Ellen and Holly Harris, "Indigenous Environmental Knowledge, the History of Science and the Discourse of Development," in *Nature Knowledge: Ethnoscience, Cognition and Utility*, ed. Glauco Sanga and Gherardo Ortalli (Berghahn Books, 2003), 297–300.

²⁷² Maui Solomon, "Intellectual Property Rights and Indigenous Peoples' Rights and Responsibilities," in *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, ed. Mary Riley (Altamira Press, 2004), 221–50.

²⁷³ Ibid.

contends that indigenous communities, including the Maori, should be engaged in drafting conservation legislation, with the goal of preserving their cultural values more than TK, which is a Western juridical object.²⁷⁴

To conclude, IPR has perpetuated the exclusion of indigenous epistemologies from the definition of the objects of juridical protection. In fact, IPR recognizes only the indigenous knowledge that is relevant for bioprospecting activities, and only if it can meet the demands of positivist science. In this context, TK is a reified representation of a broader epistemological system that law-makers exclude from the scope in defining the objects of juridical attention. In part II, I will illustrate how this legal disregard for indigenous cosmovision constrains indigenous collective rights by reference to the Mexican legal system.

²⁷⁴ Ibid.

Chapter 3 Biocultural Diversity Discourse

Biocultural diversity, a new emerging discourse in conservation studies, is founded on the core idea that biological and cultural diversity are inextricably linked and interdependent. In conservation studies, this means that the resilience of ecosystems is mutually linked to that of human communities.²⁷⁵ Within this theoretical framework, the recognition and the conservation of cultural diversity is a critical weapon in combatting ecological crises. Biocultural diversity posits that the ecosystem itself is defined by the way that local communities use, construct and inhabit their territory. The development of this idea of conservation in political and scientific fields can have a positive impact on the enjoyment of indigenous collective rights and on the debate on multiculturalism. Biocultural diversity can have an emancipatory potential for indigenous communities in so far as it relativizes the canon of modernity, offering new spaces for intercultural dialogue.

The following section offers an overview of the emergence of this new discourse.

3.1. Biocultural Diversity Discourse: Emergence of Culture in Conservation

Biocultural diversity discourse in conservation emerged in the late 1980s in the field of ethnosciences, -ethnobiology and ethnoecology - and has been consolidated through a corpus of academic works from the middle of the 1990s to the present.²⁷⁶ In addition to ethnobiology and ecology other disciplines have contributed as well, such as

²⁷⁵ Among others see: David Rapport and Luisa Maffi, "The Dual Erosion of Biological and Cultural Diversity: Implications for the Health of Ecocultural Systems.," in *Nature and Culture: Rebuilding Lost Connections*. London: Earthscan, 2010, 103–22.; Madhav Gadgil et al., *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience, 2000. Gadgil et al., *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*.

²⁷⁶ This chapter is based on the analysis of literature on biocultural diversity, mostly developed in the field of ethnoscience and also on the interviews with ethnobiologists and ecologists that I conducted in Mexico. Among other see: Sarah Pilgrim et al., "The Intersections of Biological Diversity and Cultural Diversity: Towards Integration," *Conservation and Society* 7, no. 2 (2009): 100.

linguistic,²⁷⁷ economics,²⁷⁸ and anthropology.²⁷⁹ At the moment, biocultural diversity is an *in fieri* (ongoing) debate, extended behind the traditional ethnoscience disciplines to embrace other academic fields.²⁸⁰ For this reason, scholars argue that biocultural diversity is a sort of sub-discipline of several academic fields,²⁸¹ concerning the study of the interrelation between nature and human beings with the aim of finding feasible solutions to the current ‘environmental crisis’. In this work, I consider the biocultural diversity as a new discourse in conservation that reshapes some of the core ideas that underpin conservation policy.

For this purpose, I analyze the most prominent academic works on this topic produced in the field of ethnoscience.²⁸² The emergence of this idea is rooted in a strong revision and reshaping of ethnobiology as field of investigation. This review has occurred after indigenous scholars²⁸³ and indigenous movement²⁸⁴ firmly accused ethnobiologists’ work of perpetuating an oppressive and neocolonial attitude towards indigenous and other marginalized groups. This accusation was based on the role that prominent

²⁷⁷ On the debate on eco-linguistic, see: David Harmon, “Losing Species, Losing Languages: Connections between Biological and Linguistic Diversity,” *Southwest Journal of Linguistics* 15, no. 1/2 (1996): 89–108; Peter Mühlhäusler, *Language of Environment, Environment of Language: A Course in Ecolinguistics* (Battlebridge Publications, 2003).

²⁷⁸ See the debate on the commons: Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*.

²⁷⁹ See the debate on the relationship between nature and culture: Philippe Descola, *Beyond Nature and Culture* (University of Chicago Press, 2013); Gisli Palsson Ingold, Tim, ed., *Biosocial Becomings: Integrating Social and Biological Anthropology* (Cambridge University Press, 2013).

²⁸⁰ See the debate at the intersection of politics and human rights. Among others: Michelle Cocks, “Biocultural Diversity: Moving beyond the Realm of ‘indigenous’ and ‘local’ People,” *Human Ecology* 34, no. 2 (2006): 185–200; Michel Pimbert, “Transforming Knowledge and Ways of Knowing for Food Sovereignty,” *Iied*, 2006; Gabriel Ricardo Nemogá-Soto, “Diversidad Biocultural: Innovando En Investigación Para La Conservación,” *Acta Biológica Colombiana* 21, no. 1 (2016).

²⁸¹ Sarah Pilgrim et al., “The Intersections of Biological Diversity and Cultural Diversity: Towards Integration,” *Conservation and Society* 7, no. 2 (2009): 100.

²⁸² For this work ethnosciences include ethnobiology and ethnoecology.

²⁸³ Shiva, “Farmers’ Rights, Biodiversity and International Treaties”; Mander, Jerry, *Paradigm Wars: Indigenous Peoples’ Resistance to Globalization*.

²⁸⁴ Among others see the following indigenous declarations: *The Kari-Oca Declaration*, The World Conference of Indigenous Peoples on Territory, Environment and Development. Brazil, May 30, 1992; *Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*, Aotearoa New Zealand, 1993; *Declaration of Indigenous People of the Western Hemisphere Opposing the Human Genome Diversity Project*, 1995, “*Heart of the Peoples*” Declaration, From the North American Indigenous Peoples Summit on Biological Diversity and Biological Ethics, 1997.

ethnoscience had in programs that promoted commodification of genetic resources and traditional knowledge, such as the ICBG Project²⁸⁵ and bioprospecting.²⁸⁶

Conservation of biological and cultural diversity officially became a key topic in the research agenda of the ethnobiology in 1988, when the International Society of Ethnobiology (ISE) was created at the International Congress of Ethnobiology in Belém, Brazil. In this occasion, under the lead of the prominent ethnobotanist Darrell A. Posey, the ISE adopted the Belém Declaration. The letter contains the guiding principles of the ISE future research agenda. In particular, the document acknowledges the inextricable link between cultural and biological diversity and the stewardship role of indigenous peoples in conserving genetic resources.²⁸⁷ In this document, participants denounced the harm that previous research on traditional knowledge has had on indigenous communities, contributing to the phenomenon of the biopiracy. For this purpose, one of the main resolutions of the document was to promote collaboration and dialogue with indigenous communities on future investigation. This aspect was further developed in the Code of Ethics adopted in 2006.²⁸⁸

Even if the Belém Declaration was an important event in setting a ‘new scenario’ to re-think solutions to address the environmental concerns, it is in the mid-1990s that biocultural diversity emerges as a new discourse in conservation, with an academic effort to scientifically support the interrelation between biological and cultural diversity based on co-evolutionary theories. The ethnobiologist, Luisa Maffi, is a key figure, who devoted the majority of her academic work to defining and promoting biocultural diversity as a new path for conservation.²⁸⁹ She organized academic conferences and

²⁸⁵ Berlin and Brent, “Community Autonomy and the Maya ICBG Project in Chiapas, Mexico: How,” *Elois Ann Human Organization* Winter 63, no. 4 (2004).

²⁸⁶ For a general overview of the role of biologists in bioprospecting see: Cori Hayden, “From Market to Market: Bioprospecting’s Idioms of Inclusion,” *American Ethnologist*, 2003.

²⁸⁷ Graham Posey, Darrell A., Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities* (Ottawa: International Development Research Center, 1996).

²⁸⁸ International Society of Ethnobiology, International Society of Ethnobiology Code of Ethics, 2006 (with 2008 additions). <http://ethnobiology.net/code-of-ethics/>.

²⁸⁹ Among her more relevant publications see: Maffi Luisa Carlson Thomas JS, *Ethnobotany and Conservation of Biocultural Diversity*, ed. Luisa Maffi Carlson Thomas JS (New York: New York Botanical Garden, 2004); Luisa Maffi, “Linguistic, Cultural, and Biological Diversity,” *Annual Review of Anthropology* 34, no. 1 (2005): 599–617; Luisa Maffi, *On Biocultural Diversity: Linking Language, Knowledge, and the Environment* (Washington, DC: Smithsonian Institution Press, 2001); Woodley Ellen. Maffi Luisa, *Biocultural Diversity Conservation: A Global Sourcebook*. Routledge, 2012. (Routledge, 2012).

meetings to bring together scholars belonging to different disciplines. These events aimed to explain the link between biological and cultural diversity. Furthermore, she founded an NGO, Terralingua which, among other activities, advocates to sustain the biocultural diversity of life before international fora.²⁹⁰ In 1996, she organized the conference on “Endangered Languages, Endangered Knowledge, Endangered Environments”, held in Berkeley, California. The published papers of the conference²⁹¹ reflected the academic debate on the interconnection between biological and cultural diversity, and its relevance for conservation. As the conference position paper states:

This working conference was the first international joint meeting of linguists, anthropologists, ethnobiologists, cognitive psychologists, cultural geographers, economists, biologists, ecologists, natural resource conservationists and managers, and indigenous rights advocates to discuss the interrelated threats faced by the linguistic/cultural and biological diversity of the planet. The goal was to identify a common framework and to formulate integrated plans for systematic research, training, and action aimed at addressing urgent preservation and promotion needs in this biocultural sphere. A special focus was on the role of traditional environmental knowledge and the languages in which it is encoded in the conservation of the world's ecosystems and the maintenance of sustainable human-environment interactions.²⁹²

This was the first event in which biocultural diversity became a specific academic topic of interest, and the conference was a starting point for future academic development of this idea, in particular in the field of the ethnobiology and ethnoecology.²⁹³ By contrast with biodiversity discourse, whose focus is on genes, spaces and ecosystems, biocultural diversity “comprises the diversity of life in all of its manifestations– biological, cultural, and linguistic – which are interrelated (and likely coevolved) within a complex socio-ecological adaptive system.”²⁹⁴

²⁹⁰ To know more about the work of Terralingua visit: <http://www.terralinguaubuntu.org/>; other NGOs such as Christeneenfundation and Gaia are founding local projects that promote the recovery or the strengthening of traditional ecological knowledge (TEK), languages, cultural values, practices and, local institutions, as tool to conserve the ecosystem.

²⁹¹ Maffi, *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*.

²⁹² Luisa Maffi, “Position Paper,” in *Interdisciplinary Working Conference on Endangered Languages, Endangered Knowledge, Endangered Environments* (Berkeley, California, 1996).

²⁹³ Biocultural diversity has become a central topic in the national and international annual conference of ethnobiology.

²⁹⁴ Woodley Ellen. Maffi Luisa, *Biocultural Diversity Conservation: A Global Sourcebook* (Routledge, 2012). p. 5.

This new approach, which gives scientific foundation to the interrelation between nature and culture, impacts on the role of culture in conservation in particular by:

1. rethinking the role of the community and its point of view in constructing the territory. Particularly, a new focus on the way indigenous and local communities symbolize and use it;
2. constructing culture as an endangered object as biodiversity;
3. re-shaping the relationship between scientists and indigenous communities.

The next section will offer a short overview of the main arguments to support the link between biological and cultural diversity and that have led to a new holistic approach to conservation.

3.2 Inextricable Link between Biological and Cultural Diversity

Starting from the late 1990s, studies have shown the link between cultural and biological diversity through geographic correlations between selected praxis for biological diversity (e.g. varieties of plants, vertebrates, mammals, biomes) and cultural diversity (e.g. languages, religions, ethnic groups, indigenous peoples) at global scale.²⁹⁵ For instance, studies show that seven out of nine top countries for linguistic diversity are also among the top 17 countries for biological diversity and in the top 25 countries for the number of endemic languages there are 13 out of the 17 biological megadiverse countries.²⁹⁶ In this regard, Figure I is a map that illustrates the correlation of biological and linguistic diversity.

²⁹⁵ Gilbert M. Grosvenor, Anthony R de Souza, and Mac Chapin, "The Coexistence of Indigenous Peoples and the Natural Environment in Central America: A Special Map Supplement to Research & Exploration," *National Geographic Society*, 1992; Bernard Nietschmann, *The Interdependence of Biological and Cultural Diversity* (Center for World Indigenous Studies, 1992); Maffi Luisa, *Biocultural Diversity Conservation: A Global Sourcebook*.

²⁹⁶ Tove Skutnabb-Kangas, Luisa Maffi, and David Harmon, *Skutnabb-Kangas, Tove, Luisa Maffi, and David Harmon. Sharing a World of Difference: The Earth's Linguistic, Cultural and Biological Diversity* (Unesco, 2003); William J. Sutherland, "Parallel Extinction Risk and Global Distribution of Languages and Species," *Nature* 423 (2003): 276–279; Joslin L. Moore et al., "The Distribution of Cultural and Biological Diversity in Africa," in *Proceedings of the Royal Society of London B: Biological Sciences* 269 No. 1501, 2002, 1645–53.



Figure I *Correlation on Languages and Vertebrate*²⁹⁷

Although the language is the most common representation for cultural diversity, some scholars rely on different proxies e.g., the geographical correlation between biodiversity and presence of indigenous peoples,²⁹⁸ concluding that indigenous traditional territories constitute the 22 per cent of the world's surface and account for the 80 per cent of the planet's biodiversity.²⁹⁹ In 2005, Jonathan Loh and David Harmon developed a global index of biocultural diversity in which languages, religions, and ethnic groups were proxies for cultural diversity, and the number of bird and mammal species, and plant species were proxies for biological diversity.³⁰⁰ Figure II illustrates the results of this study.

²⁹⁷ Maffi Luisa, *Biocultural Diversity Conservation: A Global Sourcebook*. Routledge, 2012., p. 7.

²⁹⁸ Oviedo Gonzalo, Peter Bill Larsen, and Luisa Maffi, *Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity* (WWF, Terralingua, 2000).

²⁹⁹ World Resources Institute (WRI) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank. 2005. Securing Property and Resource Rights through Tenure Reform, pp. 83–87 in World Resources Report 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty, Washington, D.C, 2005; Claudia Sobrevila, *The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners* (Washington DC: The World Bank , 2008).

³⁰⁰ Jonathan Loh and David Harmon, “A Global Index of Biocultural Diversity,” *Ecological Indicators* 5, no. 3 (2005): 231–41.

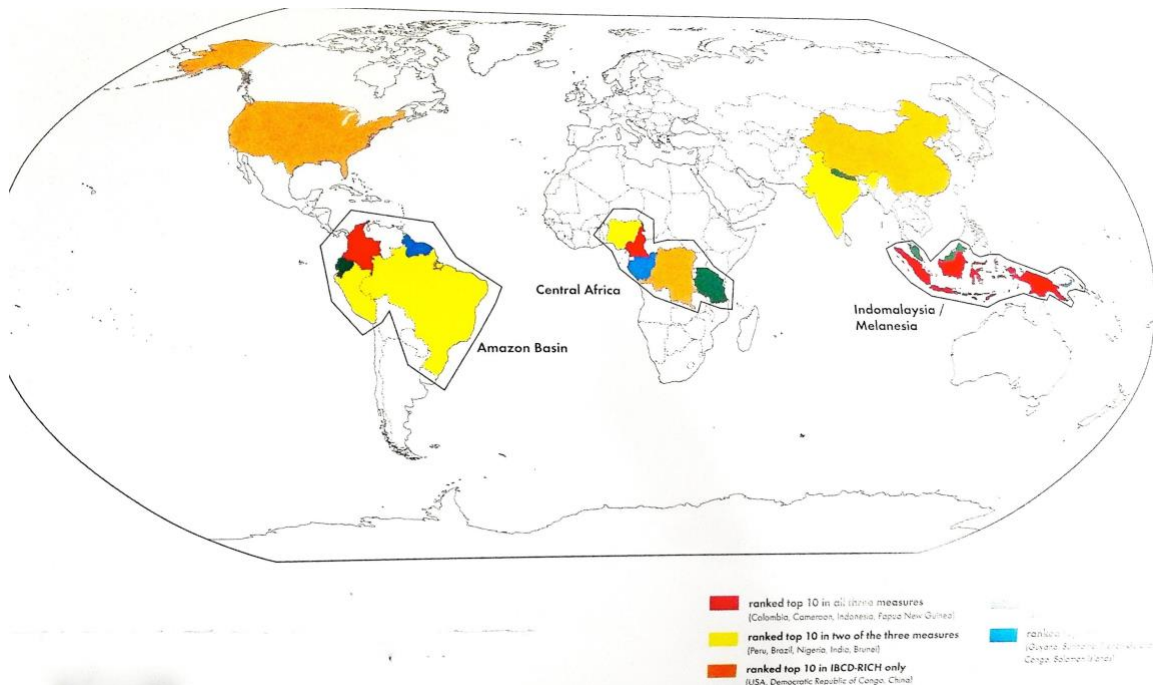


Figure II *Global Index of Biocultural Diversity*³⁰¹

These studies have demonstrated an important positive correlation between the presence of cultural diversity- represented as language, indigenous ethnic groups or religion - and biodiversity. Consequently, they have invited further investigations on how humans and non-humans species interact.

A corpus of studies, mostly rooted in ethnobiology and ethnoecology, promoted a holistic co-evolutionary approach to understand this interrelation,³⁰² overcoming the traditional dualistic Cartesian understanding of the relation between nature and culture. According to this new perspective, the ecosystem is the product of the joint action of biological and cultural forces;³⁰³ therefore, culture is revealed as a fundamental adaptive force in conservation.³⁰⁴

³⁰¹ Maffi Luisa, *Biocultural Diversity Conservation: A Global Sourcebook*. Routledge, 2012., p. 156.

³⁰² Thomas JS. Carlson and Luisa Maffi, "Introduction," in *Ethnobotany and Conservation of Biocultural Diversity*, ed. Thomas JS. Carlson and Luisa Maffi (New York: New York Botanical Garden, 2004), 1–5; Eckart Boege, "El Patrimonio Biocultural de Los Pueblos Indígenas de Mexico: Hacia La Conservación in Situ de La Biodiversidad Y Agrobiodiversidad En Los Territorios Indígenas," INAH, 2008.

³⁰³ Among others see: William L Balée, *Footprints of the Forest: Ka'apor Ethnobotany: The Historical Ecology of Plant Utilization by an Amazonian People, Biology and Resource Management in the Tropics*, 1994. William M. Denevan, *Cultivated Landscapes of Native Amazonia and the Andes*, Oxford Geographical and Environmental Studies, 2001. Jules Pretty et al., "How Do Biodiversity and Culture Intersect?," *World* 26, no. April 2016 (2008): 33–42; Maffi, "Linguistic, Cultural, and Biological Diversity"; Carlson and Maffi, "Introduction." David Harmon, *In Light of Our Differences How Diversity in*

For example, several studies show the role of culture in shaping the territory, even in more remote areas such as the Amazonian regions, and in contributing in maintaining the biological diversity. These studies explain the interrelation between nature and culture in terms of daily practices and document how communities see, represent, and symbolized this relation.³⁰⁵ Scholarship recognizes that indigenous or traditional society both offers sustainable alternative development models to manage the resources of the commons, and at the same time serves as an adaptive force. In other words, the identity, values, worldviews that make a community distinct are relevant to biocultural discourse because they offer adaptive solutions.³⁰⁶ In this framework, how human groups see nature through beliefs, values and knowledge and how they use it become relevant for conservation.

In the following sections, I will explore three relevant aspects of the biocultural diversity discourse: 1. the role of community in conservation; 2. the construction of culture as endangered; and 3. the epistemological change in conservation.

3.3 The Role of Culture in Conservation

In this new approach, culture is not reduced to a reification of the way of life -e.g., TK, language- but as epistemology. Biocultural diversity discourse reframes the traditional idea of ecosystem, including the ways communities see and symbolize their territory. As Toledo explains, the complexity of the ecosystem can be understood by analyzing three levels of interrelation between humans and nature: the *Kosmos* (cosmovision, beliefs) the *Corpus* (knowledge) and the *Praxis* (practice).³⁰⁷ A vast

Nature and Culture Makes Us Human (Washington London: Smithsonian Institution Press, 2002); Leslie M. Johnson and Eugene S. Hunn, eds., *Landscape Ethnoecology: Concepts of Biotic and Physical Space* (New York, Oxford: Berghahn Books, 2010); Michael Krauss, "Linguistics and Biology: Threatened Linguistic and Biological Diversity Compared," *Cls* 32 (1996): 69–75.

³⁰⁴ Among other see: Maffi, *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*.

³⁰⁵ For an overview of studies in this topic see: Posey, *Cultural and Spiritual Values of Biodiversity*.

³⁰⁶ Ibid.; Sarah. Pilgrim and Jules N Pretty, "Nature and Culture: An Introduction," in *Nature and Culture: Rebuilding Lost Connections*, 2010, 1–20.

³⁰⁷ Victor Manuel Toledo et al., "Ethnoecology: A Conceptual Framework for the Study of Indigenous Knowledge of Nature," in *Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology*, 2002., p. 514.

literature speaks about cultural landscape to stress the profound impact that humans have in shaping, using, and living on the land. The landscape is conceived as a symbolic environment, the product of human acts of referring meaning to nature.³⁰⁸

According to Maffi, landscapes are anthropocentric not only because of the human impact on them, but also because: “they are symbolically brought into the sphere of human communication by languages: by the words, expressions, stories, legends, songs, and verbal intersections that encode and convey human relationships with the environment and inscribe the history of those relationships onto the land.”³⁰⁹ Literature shows how the sacral and symbolic use of nature -e.g., sacred grove, sacred sites, rituals-³¹⁰ can enhance biodiversity while protecting and using specific patches of territory, plans, seeds, crops, or preventing the use of specific plants due to taboo or other customary norms.³¹¹ Drawn from my fieldwork, in the indigenous communities of Capulálpam de Méndez, water springs are sacred sites that have a fundamental cultural function for the community.

³⁰⁸ Patricia A. Stokowski, “Community Values in Conservation,” in *Reconstructing Conservation: Finding Common Ground*, 2003, 279–295.; Johnson and Hunn, *Landscape Ethnoecology: Concepts of Biotic and Physical Space*; Aída Castilleja González, “Sistemas de Conocimiento En Competencia: Un Estudio En Pueblos Purépecha Aída Castilleja González,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011).

³⁰⁹ Maffi, *On Biocultural Diversity: Linking Language, Knowledge, and the Environment.*, p. 12.

³¹⁰ Brent Berlin, *Ethnobiological Classification: Principles of Categorization of Plants and Animals in Traditional Societies* (Princeton University Press, 2014). Oviedo Gonzalo Verschuuren, Bas, Wilde, Robert, McNeely, A. Jeffrey, ed., *Sacred Natural Sites: Conserving Nature and Culture* (Routledge, 2010); James P Robson and Fikret Berkes, “Chapter 8 Sacred Nature and Community Conserved Areas,” 2009, 1–16. Berkes, *Sacred Ecology*; Tim Ingold, “Two Reflections on Ecological Knowledge,” in *Nature Knowledge: Ethnoscience, Cognition, Identity*, ed. Ortalli Gheraldo Sangha Glauco (New York Oxford: Berghahn Books, 2003), 301–11.; ed.. Nazarea, Virginia D., *Ethnoecology: Situated Knowledge/located Lives* (University of Arizona Press, 1999); Pretty et al., “How Do Biodiversity and Culture Intersect?”

³¹¹ Rao. R. R, “Tribal Wisdom and Conservation of Biological Diversity,” in *Ethnobiology and Biocultural Diversity: Proceedings of the Seventh International Congress of Ethnobiology*, ed. Zarger KI. Rebecca Stepp R. John, Wyndham S. Felice (Athens, Georgia: International Society of Ethnobiology, 2002), 84–94; Eugene N. Anderson, “Biodiversity Conservation: A New View from Mexico,” in *Ethnobiology and Biocultural Diversity: Proceedings of the Seventh International Congress of Ethnobiology*, ed. Rebecca K. Zarger John R. Stepp, Felice S. Wyndham (International Society of Ethnobiology, 2002), 113–22.

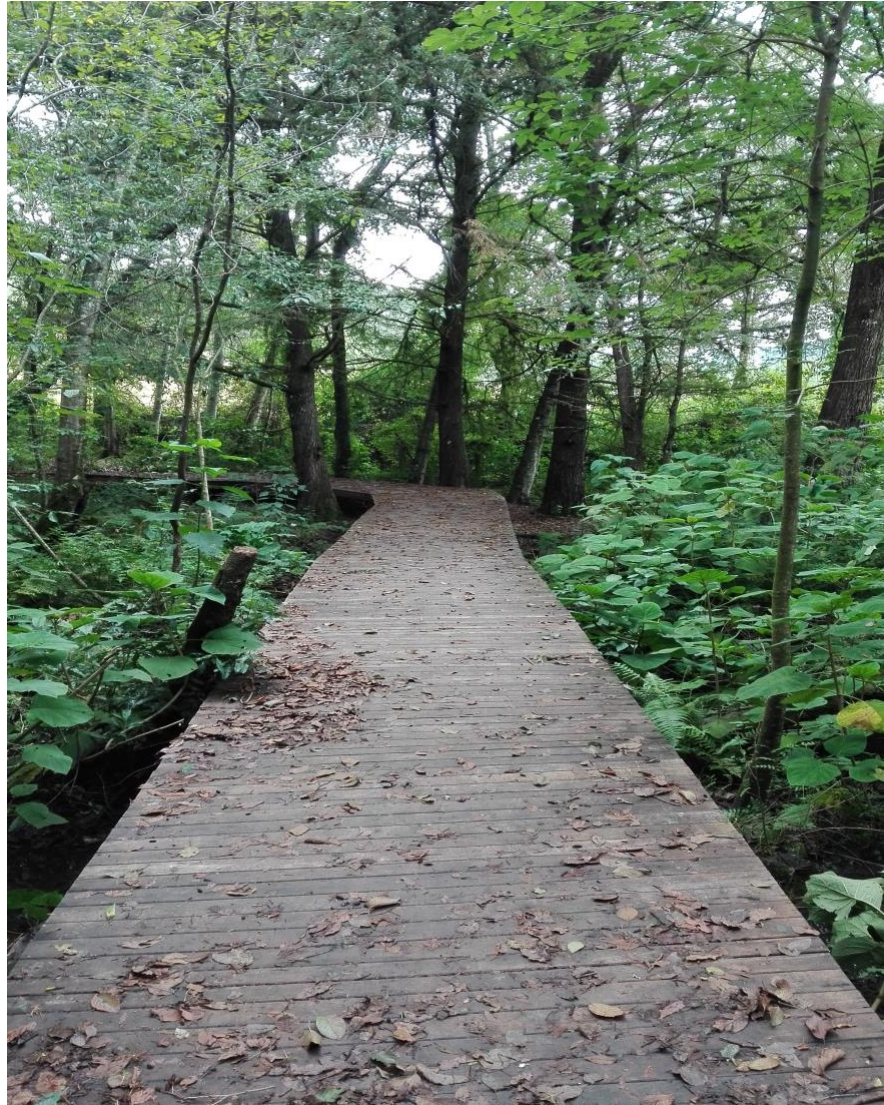


Figure III *Los Sabinos, Sacred Site, Capulálpam de Méndez*³¹²

Indigenous knowledge, rituals, practices, institutions, and sacred sites are relevant to conservation because they offer an insight on how communities engage with biodiversity and how the surrounding environment shapes them. In this perspective, biodiversity and cultural diversity co-evolve and are intrinsically linked; therefore, culture is a fundamental force in conserving and preserving biodiversity and vice versa. For instance, the disappearance of traditional, ritual, and medicinal plants due to factors such as climate change and pollution, can strongly affect the identity of groups. Mexican corn is one example; the pollution and the disappearance of this seed has become a concern of cultural identity. Furthermore, under biocultural diversity discourse, the

³¹² Photo of the Author.

disappearance of a language, or a ritual may embody a specific biological practices or knowledge, the loss of which can adversely impact biodiversity.

Finally, this new approach also changes the methodology of mapping space for conservation purposes. Maps start showing the meanings and the uses that the community gives to its territory and resources, changing the objects of conservation according to its view. Consequently, this kind of mapping, reflecting the ways the community uses and lives its territory, becomes an important community tool to re-appropriate its territory by depurating it from external imposed use and representation. Figure IV shows an example of this kind of mapping system.

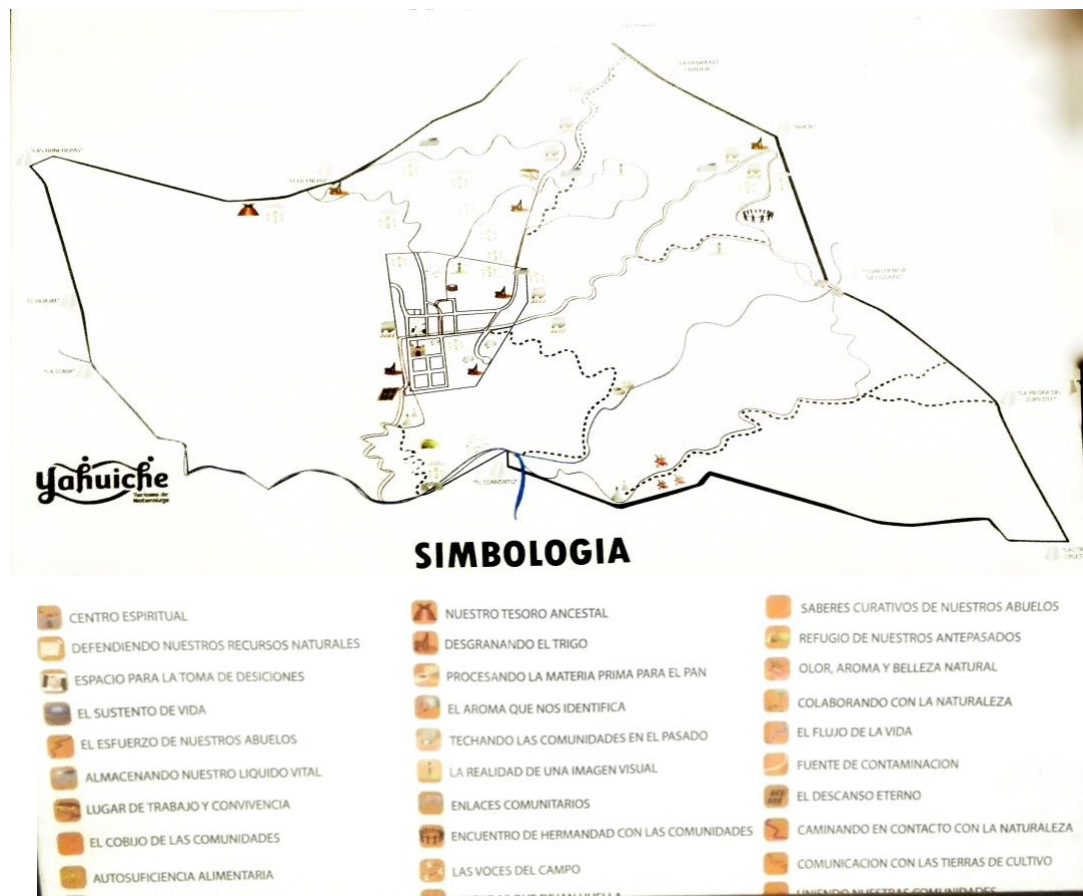


Figure IV Maps of the Indigenous Community of Santa Maria Yahuiche³¹³

³¹³ Photo of the Author.

To conclude, biocultural diversity discourse restores the indigenous epistemology as a fundamental praxis in pursuing conservation policies and activities.

3.4 Construction of Culture as Endangered

Under biocultural diversity discourse, culture is conceived as a pool of adaptive solutions that can be used by future generations; as such, cultural diversity is relevant to conservation, and needs to be protected. These adaptive solutions are the holistic ways in which communities interact with the surrounding environment. In this context, culture is more than the reification of specific aspects of a way of life- e.g., TK, tradition or language; it embraces the complex system of interrelation of the indigenous community with the surrounding environment, known as relational epistemology. Toledo speaks about the biocultural memory that corresponds with the indigenous epistemologies that have been oppressed under the process of colonization.³¹⁴

Because indigenous epistemologies are indispensable to conservation, conservation studies are compelled to focus on the way states accommodate cultural diversity and recognize indigenous epistemologies. In the paper ‘the intersection of biological diversity and cultural diversity: towards integration’, the authors present some common drivers or threats to biological and cultural diversity, including assimilationist policies that perpetuate the canon of modernity to the detriment of indigenous epistemologies.³¹⁵ Some examples include the modernization of healthcare systems, the spread of formal education as a vehicle for the expansion of dominant beliefs, languages loss, globalization of food, and privatization of lands rights.³¹⁶ All these policies negatively affect biodiversity by jeopardizing the indigenous community’s relationship

³¹⁴ Victor M; Toledo and Narciso Barrera-Bassols, *La Memoria Biocultural: La Importancia Ecológica de Las Sabidurías Tradicionales* (Junata de Andalucía, Icaria Editorial, 2008).

³¹⁵ Pilgrim et al., “The Intersections of Biological Diversity and Cultural Diversity: Towards Integration.”

³¹⁶ Sarah Pilgrim et al., “The Intersections of Biological Diversity and Cultural Diversity: Towards Integration,” *Conservation and Society* 7, no. 2 (2009): 100.

with its territory. For instance, the loss of traditional medicine and food, leads to loss of agrobiodiversity and loss of certain species.³¹⁷

For the abovementioned reason, indigenous collective rights become a matter of concern in conservation studies. Every conference of ethnobiology deals with indigenous rights.³¹⁸ In fact, indigenous collective rights are relevant to perpetuate the indigenous relational ontologies that allow for conservation of biodiversity. As Gabriel Soto points out: “Debido a que para los pueblos indígenas su conocimiento está intrínsecamente articulado con su forma de vida, el derecho a la libre determinación es relevante en el diseño de mecanismos para la conservación y protección del conocimiento tradicional.”³¹⁹

Indigenous collective rights become object of theorization by conservationists. Posey, the father-founder of the ethnobiology, develops the idea of Traditional Resource Rights (TRR) as one aspect of indigenous collective rights.³²⁰ TRR is a new analytical approach to think about indigenous collective rights that relies upon different national and international legal sources to identify ‘bundles’ of indigenous collective rights. As the author points out, “the result should lead to new attitudes towards indigenous peoples and their knowledge, new codes of ethics and standards of conduct, socially and ecologically responsible business practices, and new concepts of property, ownership, and value.”³²¹

Following Posey other ethnobiologists and ecologists start engaging with this topic.³²² Maffi advocates for the so-called ‘right to orality’.³²³ For the author the

³¹⁷ Ibid.

³¹⁸ Among others see: F S Stepp J. R.; Wyndham and R K Zarger, “Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology, October 2000,” in *Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology, Athens, Georgia, USA, October 2000.*, 2000; Luisa Maffi, *On Biocultural Diversity: Linking Language, Knowledge, and the Environment* (Washington, DC: Smithsonian Institution Press, 2001).

³¹⁹ “Since for indigenous peoples their knowledge is intrinsically connected to their way of life, the right to self-determination is relevant to design mechanisms to conserve and protect traditional knowledge.” My translation. Gabriel Ricardo Nemogá-Soto, “La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural,” 2013., p. 11.

³²⁰ Darrell A. Posey, “Protecting Indigenous Peoples’ Rights to Biodiversity,” *Environment: Science and Policy for Sustainable Development* 38, no. 8 (1996): 6–45.

³²¹ Ibid.

³²² Luisa Maffi, “Language, Knowledge, and Indigenous Heritage Rights,” in *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*, ed. Luisa Maffi (Washington, DC: Smithsonian Institution Press, 2001); Arturo Argueta Villamar, “El Diálogo de Saberes, Una Utopía Realista,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-M, and Paul

entitlement with this right is necessary to guarantee the inextricable tie between indigenous communities and the environment. Therefore, this right is functional to guarantee the effective enjoyment of indigenous heritage rights.³²⁴ Victor Toledo developed a sophisticate scholarship in which he shows the interrelation among indigenous epistemologies, collective rights and state policies.³²⁵ Moreover, other authors advocate for incorporation of indigenous customary laws into the current legal system of access to GRs and TK³²⁶ with the goal of overcoming colonial inequalities of power.³²⁷

In biocultural diversity discourse, culture is a fundamental weapon in combatting ecological crisis and collective rights are fundamental tools to protect, valorize, and recover indigenous epistemology. Furthermore, biocultural diversity discourse does not justify the support of indigenous institutions based on their market potential as social capital, nor is it underpinned by economic standards. Rather, it treats cultural sovereignty as one component of the right to self-determination. The next section looks at the change in the methodological approach in conservation brought about by biocultural discourse.

3.5 Dialogue of Knowledge: Epistemological Change in Conservation

Recognizing the relevance of indigenous relational epistemology for conservation means both: overcome the privilege of modernity in conservation and open up a new space for intercultural dialogue. Under biodiversity paradigm, TK is reified and partial representation of the indigenous ways of life whose validity and utility is test against the canon of positivist sciences and economic interests. Indigenous communities are only

Hersch (Ibero Puebla, México: UNAM, INAH, 2011); Víctor M. Toledo, “Indigenous Peoples and Biodiversity,” in *Encyclopedia of Biodiversity*, 2013.

³²³ Maffi, “Language, Knowledge, and Indigenous Heritage Rights.”

³²⁴ Luisa Maffi, “Language, Knowledge, and Indigenous Heritage Rights,” in *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*, ed. Luisa Maffi (Washington, DC: Smithsonian Institution Press, 2001).

³²⁵ Víctor M. Toledo, “Indigenous Peoples and Biodiversity,” in *Encyclopedia of Biodiversity*, 2013; Víctor M. Toledo, *Ecocidio En México: La Batalla Final Es Por La Vida* (Grijalbo, 2015).

³²⁶ Ibid.; Graham Posey, Darrell A., Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities* (Ottawa: International Development Research Center, 1996).

³²⁷ Arturo Argueta Villamar, “El Diálogo de Saberes, Una Utopía Realista,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

depository of data to be collected.³²⁸ In this formwork, those indigenous epistemologies that cannot meet the standards of the positive science and economic utility, are labeled as backward, historical artifacts and, in some cases, environmentally dangerous, therefore in need to be modernized.

Biocultural diversity discourse opens up a new epistemological revolution in conservation. Overcoming the Cartesian separation between nature and culture, it offers a space to other epistemologies to participate in the debate on conservation. Furthermore, re-conceptualizing the ecosystem as the product of the interrelation between culture and nature recognizes different ways of living the environment. In other words, biocultural diversity discourse recognizes that Western science offers just a partial approach to understand the relationship between nature and human beings and that indigenous epistemology can contribute in this definition.³²⁹

If under biodiversity discourse, the role of ethnobiologists is relegated to translate indigenous epistemology according to the canon of modern positivist science, in the case of biocultural diversity they work together with communities to define the objects of conservation. Part of the literature has stressed the importance of advancing a collaboration between local communities and scientist in shaping the objects of conservation.³³⁰ Benjamin T. Wilder *et al* speak about a ‘citizen science’ to describe the collaboration between scientists and local communities. The authors advocate for integrate indigenous knowledge in designing long stand and sustainable conservation programs. Particularly, they recognize the importance of supporting those communities

³²⁸ Arturo Escobar, “Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements,” *Journal of Political Ecology* 5 (1998): 53–82; Gabriel Ricardo Nemogá-Soto, “La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural,” 2013.

³²⁹ Ibid.; Pierotti, Raymond, Daniel, “Traditional Ecological Knowledge: The Third Alternative (Commentary).”

³³⁰ Benjamin T. Wilder et al., “Ethnoscience, the ‘Oldest science’. A Needed Complement to Academic Science to Stem the Losses of Biodiversity, Indigenous Languages, and Livelihoods,” in *Ethnobiology for the Future: Linking Cultural and Ecological Diversity*, ed. Gary Paul Nabhan (University of Arizona Press, 2016); Michael C. Gavin et al., “Defining Biocultural Approaches to Conservation,” *Trends in Ecology and Evolution* 30, no. 3 (2015): 140–45; María Elena Méndez-López et al., “Local Participation in Biodiversity Conservation Initiatives: A Comparative Analysis of Different Models in South East Mexico,” *Journal of Environmental Management*, 2014; Louise Fortmann, ed., *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together* (John Wiley & Sons, 2009).

that are revitalizing and preserving native languages and traditional livelihoods based on natural resources.³³¹

In this stream of argument, Ramachandra Guha points out that a conservation policy only based on forestry science, engineering, and resource management jeopardizes the democratic process in so far as it makes local opinions irrelevant.³³² My fieldwork in Mexico collected empirical data on the need to re-define the relationship between indigenous communities and scientists. Specifically, I present the case of the *Red de Etnoecología Y Patrimonio Biocultural* (Network of Ethnoecology and Biocultural Heritage-Red).³³³

The *Red* led by the prominent ethnoecologist Victor Toledo, is developing a methodology for conservation of biocultural heritage. A core aspect of *Red*'s approach is intercultural dialogue and peer participation of communities in defining the objects and strategies of conservation. As Aida Castilleja Gonzalez explains, the way the communities live and gives meaning to the territory is at the heart of conservation.³³⁴ The objects of conservation are selected according to the cultural values that certain natural components have for communities. Then the communities and the scientists collaborate to find the proper knowledge and tools to design the conservation strategy.³³⁵ The conservation strategy includes the development of a network of activities around the species that have a cultural value.³³⁶ One of the core issues that emerges in publications and meetings is the recovery and the re-appropriation by the community of meanings that were lost during colonization and modernization.³³⁷

³³¹ Benjamin T. Wilder et al., "Ethnoscience, the 'Oldest science'. A Needed Complement to Academic Science to Stem the Losses of Biodiversity, Indigenous Languages, and Livelihoods," in *Ethnobiology for the Future: Linking Cultural and Ecological Diversity*, ed. Gary Paul Nabhan (University of Arizona Press, 2016).

³³² Ramachandra Guha, "Two Phases of American Environmentalism: A Critical History," in *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*, ed. Stephen Appfel-Marglin and A. Frédérique Marglin (Oxford University Press, 1996).

³³³ This part is based on interviews with members of the Red de Etnoecología Y Patrimonio Biocultural, CONACYT, and participation to strategic meetings of the Red.

³³⁴ Castilleja Gonzalez Aida, *Programmatic Meeting of the Red de Etnoecología Y Patrimonio Biocultural, CONACYT*, Patzcuaro, Michoacan, December 12, 2016, file with author.

³³⁵ Argueta Andres and Castilleja Gonzalez Aida, *Programmatic Meeting of the Red de Etnoecología Y Patrimonio Biocultural, CONACYT*, Patzcuaro, Michoacan, December 12, 2016, file with author.

³³⁶ Argueta Andres, *Programmatic Meeting of the Red de Etnoecología Y Patrimonio Biocultural, CONACYT*, Patzcuaro, Michoacan, December 12, 2016, file with author.

³³⁷ Boege, "El Patrimonio Biocultural de Los Pueblos Indígenas de Mexico: Hacia La Conservación in Situ de La Biodiversidad Y Agrobiodiversidad En Los Territorios Indígenas"; Victor M; Toledo and Narciso

This approach to conservation, also comprises a legal dimension. A core issue is the recognition and implementation of the indigenous right to self-determination, as expressed in the laws and norms that dictate how territory is signified and used.³³⁸ As Soto explains:

Responder las preguntas sobre qué se ha de entender por “protección” y qué se ha de proteger, requiere de la participación autónoma, activa y plena de los pueblos conforme a su derecho consuetudinario y sus costumbres. Son los propios pueblos y las comunidades indígenas las que deberán decidir sobre las prioridades sociales, políticas, culturales y económicas para su permanencia y fortalecimiento como pueblos.³³⁹

Arturo Argueta argues that, given the colonization process, a central and core issue is the recovery of indigenous systems of knowledge.³⁴⁰ The author proposes the adoption of legal instruments to enhance the conservation and the sustainable use of resources by those communities whose resources have been misused and misappropriated.³⁴¹ Toledo points out that for indigenous communities the management of biological diversity is a mean of reaching food sovereignty, and therefore territorial, political, and economic self-determination.³⁴²

To conclude, as Leff points out, modern rationality is powerless to find solutions to cope with the ecological crisis, and therefore the dialogue of indigenous knowledge is the only feasible path.³⁴³ This dialogue requires the advancement of an ethic of

Barrera-Bassols, *La Memoria Biocultural: La Importancia Ecológica de Las Sabidurías Tradicionales* (Junata de Andalucía, Icaria Editorial, 2008).

³³⁸ Aída Castilleja González, “Sistemas de Conocimiento En Competencia: Un Estudio En Pueblos Purépecha Aída Castilleja González,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011).

³³⁹ “To answer the question about what is the meaning of ‘protection’ and what should be protected, we need to grantee the autonomous, active and full participation of the peoples according to their customary legal system. Peoples themselves and indigenous communities should decide over their social, political, cultural, and economic priorities to remain distinctive peoples.” Nemogá-Soto, “La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural.”, p. 11.

³⁴⁰ Arturo Argueta Villamar, “El Diálogo de Saberes, Una Utopía Realista,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

³⁴¹ Ibid.

³⁴² Víctor Manuel Toledo, “Del ‘diálogo de Fantasmas’ Al ‘diálogo de Saberes’: Conocimiento Y Sustentabilidad Comunitaria,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

³⁴³ Enrique Leff, “Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo

distinctiveness and a policy of differences.³⁴⁴ The idea of sustainability needs to be re-conceptualized in a constant dialogue with local experiences and epistemologies.³⁴⁵ For Toledo sustainability entails citizen control over natural and social processes as an alternative to modernity. Particularly, a society is sustainable when it recognizes cultural differences and allows for the recovery of the oppressed.³⁴⁶ As a consequence, under biocultural diversity, situated experiences of indigenous communities become fundamental to establish conservation strategies according to the communities' epistemology and needs. Therefore, there is a recognition of the plurality of the communities that avoids essentialization and standardized conservation policy.

Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

³⁴⁴ Ibid.

³⁴⁵ Enrique Leff, “Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

³⁴⁶ For the author a ‘sustainable society’ presents the following features: a) ecological restoration; b) social restoration; and c) cultural recognition and re-affirmation. Víctor Manuel Toledo, “Del ‘diálogo de Fantasmas’ Al ‘diálogo de Saberes’: Conocimiento Y Sustentabilidad Comunitaria,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

Preliminary Conclusion Part I

In this part, I presented the theoretical frame in which my analysis is situated and then, relying on constructivism, post-structuralism, critical thinking, and Science and Technology Study, I showed the emergence of two discourses that influences conservation policy: biodiversity and biocultural diversity. Ultimately, this part offered analytical and theoretical tools to navigate the impact of conservation policies on the effective enjoyment of indigenous collective rights, and more broadly to contribute to the debate on accommodation of cultural diversity in multicultural societies in the era of ecological crisis.

Chapter 1 analyzed the relationship between indigenous peoples and the state relying on the cognitive injustice approach. If multiculturalism is conceived as “a political project that attempts to redefine the relationship between [indigenous peoples] and the state through the adoption of new laws, policies or institutions,”³⁴⁷ relying on the cognitive injustice approach, I presented a specific root cause of the need for rethinking this relationship. According to the cognitive injustice approach, modernity as a dominant model, universalizes its practice; therefore, the oppression of indigenous peoples and the violation of their fundamental rights is rooted in the exclusion of their ontologies/epistemologies in the political, legal, and scientific debate.

Under the cognitive injustice approach, the legal analysis requires to look at the epistemological dimension to reveal the root cause of the violation of indigenous rights and the limits of the current multicultural policy. To address and accommodate indigenous cultural diversity within the fabric of the state, a deep reshaping of the state institutions and legal system is needed to recognize indigenous institutions and offer an equal space to indigenous epistemologies to participate in the intercultural dialogue. For this reason, I stressed the importance of focusing on cultural sovereignty as a pivotal component of the right to self-determination.

Some indigenous scholars have developed the concept of cultural sovereignty to include an epistemological component in the understanding of the right to self-

³⁴⁷ Will Kymlicka, “The Rise and Fall of Multiculturalism? New Debates on Inclusion and Accommodation in Diverse Societies,” *International Social Science Journal*, 2010, p. 99. See also: Will Kymlicka, “Liberal Multiculturalism as a Political Theory of State–Minority Relations,” *Political Theory*, 2017.

determination.³⁴⁸ For these authors only by recognizing cultural sovereignty as intrinsic component of the right to self-determination, indigenous tribes can effectively enjoy their rights. In this context, sovereignty means re-appropriation of the meanings and symbols that the mainstream society has delegitimized and misrepresented. It also means, re-appropriate the use of the land and resources according to the community's cosmovision, and way of life.

In this strain of argument, some scholars have further developed the debate concerning the legal space to effectively accommodate indigenous peoples' requests.³⁴⁹ They suggest looking at the process of hybridization of the legal field with different ontologies. To effectively accommodate cultural diversity, the Western liberal legal field need to be reshape to include ontologies, different from the Western one.³⁵⁰ For instance, these authors look at the accommodation of those ontologies that do not separate between human beings and nature, as in the case of some indigenous communities in the Andes.³⁵¹ They present as examples of the process of hybridization of the legal field with different ontologies the case of the Equatorian and Bolivian Constitutions.³⁵² Recognizing the right to Mather Erath, these Constitutions entitle non-human entities with fundamental rights, overcoming one of the core canons of the Western legal subjectivity.

In Chapters 2 and 3, I suggested revealing the myth of the 'epistemological blindness' of the conservation policies. Broadly speaking conservation policy deals with

³⁴⁸ Among other see: Coffey and Tsosie, "Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations"; Tsosie, "Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought"; Deloria and Clifford, *The Nations within: The Past and Future of American Indian Sovereignty*; Krakoff, "A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation"; Warrior, "Intellectual Sovereignty and The Struggle for An American Indian Future. Chapter 3 of Tribal Secrets"; Anaya, *Indigenous Peoples in International Law*.

³⁴⁹ Some anthropologists have stated to navigate this complex topic, see: Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010; Mario Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages," *Cultural Geographies*, 2012; Arturo Escobar, "Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South," *AIBR Revista de Antropologia Iberoamericana*, 2016.

³⁵⁰ De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'"; Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages"; Escobar, "Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South."

³⁵¹ Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016).

³⁵² Arturo Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?," *Cultural Studies* 24, no. 1 (2010): 1–65; Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010.

the relationship among nature, humans, non-humans, and market. As I stated, the way this relationship is regulated, thought, and experienced is not universal; therefore, the objects of conservations are not neutral and objective, but product of economic, social and cultural, forces. To unhidden their neutrality, I addressed the following topics: how the objects of conservation emerge and who defines them; what are the meanings that conservation policies bear; what are the legal instruments through which these meanings are implemented; and what are the mechanisms through which indigenous epistemologies are excluded or included from the conservation debate.

In Chapter 2, I introduced the biodiversity discourse in conservation. As I proved, this discourse is based on the following pillars:

- a) *Privilege of Western modern science to define the object of conservation.*
- b) *Construction of nature in economic terms.*
- c) *Ecosystem approach that presupposes a separation between nature and culture.*
- d) *Centrality of the management and planning of the environment*

Western scientists speak for the earth;³⁵³ they establish the conditions under which other systems of knowledge are permitted to enter into the dialogue. Some scholars have relied on cognitive injustice formwork to denounce the exclusion of other systems of knowledge from the definition of the objects of conservation.³⁵⁴ On this matter, the daily experiences of indigenous and local communities show that conservation issues are more than a stand for the preservation of GRs and ecosystems. They are new sites of symbolic conflicts, and means of resistance. For instance, the preservation of native seeds is not only an *in situ* conservation technique, but also a way to resist against the monoculture of mind, to preserve epistemological systems, and eventually to advance the right to self-determination and other collective rights.

³⁵³ Escobar, *Encountering Development. The Making and Unmaking of the Thrid World.*

³⁵⁴ Vandana Shiva, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology* (Palgrave Macmillan, 1993); Stephen A. Appfel-Marglin, Frédérique, Marglin, ed., *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue* (Oxford University Press, 1996); A Escobar, "Whose Knowledge Whose Nature? Biodiversity Conservation and the Political Ecology of Social Movements," *Journal of Political Ecology*, 1998; Enrique Leff, *Racionalidad Ambiental: La Reapropiación de La Naturaleza, La Reapropiación Social de La Naturaleza*, 2004.

In Sections 2.5 and 2.6, I showed how biodiversity discourse is translated into the legal framework and its implications for indigenous collective rights. In doing that, I used the example of Intellectual Property Rights (IPR). Embracing a decolonial perspective, I demonstrate that the application of IPR to regulate the access and use of GRs and TK as new objects of conservation raised a cognitive conflict. The IPR reflects Western legal subjectivity and view of nature that is incompatible with indigenous cosmology and customary legal systems. In fact, IPR is built on a liberal and individual conceptualization of property that does not take into account the indigenous communal tenure system.³⁵⁵

Furthermore, the IPR embraces the privilege of modernity in defying TK and GRs, excluding indigenous epistemologies. In this regard, decolonial scholarship has accused IPR of bearing a specific idea of nature constructed in techno-economic terms (see Section 2.3).³⁵⁶ This idea of nature does not find correspondence in the indigenous cosmology and relationship with the environment. As some scholars have denounced, the IPR's blindness before indigenous epistemology can lead to new forms of epistemicide by perpetuating the privilege of modernity and disregarding the existence of other systems of knowledge. In fact, by creating hierarchies among plants and species to be preserved as well as, techniques of conservation, indigenous cultural and social practices linked to those plants and species that are excluded from any legal protection can be adversely impacted

Chapter 3 illustrated the emergence of biocultural diversity discourse in the late 1990s. This is an *inferi* discourse that originates in ethnoecology and ethnobiologists studies. Relying mostly on the literature produced in ethnoecology and ethnobiology, this chapter explored the affirmation of this new discourse. Particularly, I described the following core pillars:

³⁵⁵ Bubela and Gold, *Genetic Resources and Traditional Knowledge: Case Studies and Conflicting Interests*; Gibson, *Community Resources*. See also: *The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*, Para. 2.5.

³⁵⁶ Apffel-Marglin, Frédérique, Marglin, *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*; Carl Wilmsen et al., eds., *Partnerships for Empowerment: Participatory Research for Community-Based Natural Resource Management* (Routledge, 2012); Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (Zed books, 1999); Laurelyn Whitt, *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*, Cambridge University Press, 2009.

- a) *Construction of nature based on the inextricable link between biological and cultural diversity.* The resilience of the ecosystems is mutually linked to that of human communities;
- b) *Construction of culture as endangered as biodiversity.* Once culture is conceived as a pool of adaptive solutions that can be used by future generations, needs to be protected;
- c) *Relevance of the communities in the definition of the ecosystem.* The way the local communities use, construct and live their territory is fundamental to define the idea of ecosystem;
- d) *Dialogue of knowledge.* Recognizing the relevance of indigenous relational epistemology for conservation means both: overcome the privilege of modernity in conservation and open up a new space for intercultural dialogue.

Because it relativizes the canons of modernity by favoring the participation of indigenous epistemologies in defining objects of conservation, this discourse has the potential to emancipate indigenous peoples. In fact, biocultural diversity discourse restores the indigenous epistemology as a fundamental praxis in pursuing conservation policies and activities. Because indigenous epistemologies are indispensable to conservation, conservation studies are compelled to focus on the way states accommodate cultural diversity and recognize indigenous epistemologies. Therefore, in the biocultural diversity discourse, state policies that perpetuate the canons of modernity to the detriment of indigenous epistemologies need to be addressed as an ecological concern.³⁵⁷ In fact, these policies can negatively affect biodiversity by jeopardizing the indigenous community's relationship with its territory.

Recognizing the relevance of indigenous relational epistemology for conservation means both: overcome the privilege of modernity in conservation and open up a new space for intercultural dialogue. Under biodiversity paradigm, TK is reified and partial representation of the indigenous ways of life whose validity and utility is test against the canon of positivist sciences and economic interests. Indigenous communities are only

³⁵⁷ Sarah Pilgrim et al., "The Intersections of Biological Diversity and Cultural Diversity: Towards Integration," *Conservation and Society* 7, no. 2 (2009): 100.

depository of data to be collected.³⁵⁸ In this formwork, those indigenous epistemologies that cannot meet the standards of the positive science and economic utility, are labeled as backward, historical artifacts and, in some cases, environmentally dangerous, therefore in need to be modernized.

Biocultural diversity discourse opens up a new epistemological revolution in conservation. Overcoming the Cartesian separation between nature and culture, it offers a space to other epistemologies to participate in the debate on conservation. Furthermore, re-conceptualizing the ecosystem as the product of the interrelation between culture and nature recognizes different ways of living the environment. In other words, biocultural diversity discourse recognizes that Western science offers just a partial approach to understand the relationship between nature and human beings and that indigenous epistemology can contribute in this definition.³⁵⁹

As I showed in the case of the *Red*, ethnobiologists works together with communities to define the objects of conservation. This approach to conservation also comprises a legal dimension. A core issue is the recognition and implementation of the indigenous right to self-determination, as expressed in the laws and norms that dictate how territory is signified and used.³⁶⁰ Toledo points out that for indigenous communities the management of biological diversity is a mean of reaching food sovereignty, and therefore territorial, political, and economic self-determination.³⁶¹

The way the state cope with cultural differences becomes an ecological concern that need to be framed as part of the solutions to address the ecological crisis. The intercultural dialogue becomes a fundamental component to find solutions to cope with the ecological crisis.³⁶² This dialogue requires the advancement of an ethic of

³⁵⁸ Escobar, "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements," 1998; Nemogá-Soto, "La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural."

³⁵⁹ Ibid.; Pierotti, Raymond, Daniel, "Traditional Ecological Knowledge: The Third Alternative (Commentary)."

³⁶⁰ Aída Castilleja González, "Sistemas de Conocimiento En Competencia: Un Estudio En Pueblos Purépecha Aída Castilleja González," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011).

³⁶¹ Víctor Manuel Toledo, "Del 'diálogo de Fantasmas' Al 'diálogo de Saberes': Conocimiento Y Sustentabilidad Comunitaria," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

³⁶² Enrique Leff, "Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad," in *Saberes Colectivos Y Diálogo de Saberes En México* , ed. Arturo

distinctiveness and a policy of differences.³⁶³ The idea of sustainability needs to be re-conceptualized in a constant dialogue with local experiences and epistemologies.³⁶⁴ For Toledo sustainability entails citizen control over natural and social processes as an alternative to modernity. Particularly, a society is sustainable when it recognizes cultural differences and allows for the recovery of the oppressed.³⁶⁵ As a consequence, under biocultural diversity, situated experiences of indigenous communities become fundamental to establish conservation strategies according to the communities' epistemology and needs.

Part II will further develop the concepts and ideas that I presented here. Part II will change the scale of analysis, looking at the impact of conservation discourses on collective rights based on the practice of indigenous communities in the Mexican state of Oaxaca. Since the early 1990s, given the high presence of biological diversity, this area has become target of federal conservation policy. The latter has to deal with the presence of the indigenous peoples that have legal titles over about 80 per cent of the Oaxacan territory. This scenario is particularly suitable for showing the impact of this policy on indigenous collective rights. In detail, this part navigates: a) how the official Mexican conservation policy interacts with indigenous collective rights; b) how indigenous communities use biocultural diversity discourse to re-appropriate their way of life the territory; and c) how conservation discourses are 'vernacularized' into indigenous customary legal systems and legal strategies.

Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

³⁶³ Ibid.

³⁶⁴ Enrique Leff, "Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

³⁶⁵ For the author a 'sustainable society' presents the following features: a) ecological restoration; b) social restoration; and c) cultural recognition and re-affirmation. Víctor Manuel Toledo, "Del 'diálogo de Fantasmas' Al 'diálogo de Saberes': Conocimiento Y Sustentabilidad Comunitaria," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

Part II Conservation Discourses Meet the Indigenous Struggle over the Territory: the Case of Oaxaca

Part II presents the struggle of indigenous peoples over their territory in Mexico. After an introduction of the system of collective rights recognized in the Mexican legal system, Chapter 4 offers a brief overview on indigenous epistemology focusing on the idea of *comunlaidad* and presenting the indigenous holistic relation to nature and territory. Indigenous epistemology is not effectively recognized in the Mexican legal system that protects indigenous rights, as well as in Mexican public policy. In this regard, relying on the cognitive injustice framework, Chapter 5 shows the pattern of exclusion suffered by indigenous peoples due to the lack of recognition of their epistemologies into the Mexican policy. In fact, the latter promotes interventions that aim at modernizing the Indians.

The process of modernization is justified based on a labeling process that relegates the practices that are expression of indigenous epistemologies -indigenous unique economy, social and cultural system- into the sphere of poverty or margination. Based on this narrative, the Mexican government promotes policy of modernization of the poor farmers. Conservation policies are implemented into this complex frame.

Chapter 6 looks closely to the Mexican policy on conservation, concluding that it is based on biodiversity discourse. In detail, this chapter describes some of the adverse consequences that this policy has brought about for indigenous rights to self-determination and other collective rights. Furthermore, it shows the emergence of new legal sites of struggles. In this regard, environmental policy promotes some legal instruments that can limit or support indigenous collective rights. Then, I introduce biocultural discourse as a potentially emancipatory for indigenous collective rights.

For emancipation, I mean the way discourses can be used to create and protect certain aspiration, instead of perpetuate the *status quo*.³⁶⁶ In this matter, in the case of indigenous peoples, the expectation for the effective enjoyment of self-determination, as conceived in a specific community, is frustrated by the policies and legal norms

³⁶⁶ I elaborate this concept of emancipation starting from the work of De Sousa Santos. The author uses this concept in relation to the law instead of discourses. See: Boaventura de Sousa. Santos, *Towards a New Legal Common Sense* (London: Butterworth, 2002).

implemented by the established order. Discourses or legal norms become emancipatory when they offer the indigenous community a mean for protecting its expectations, its idea over territory, its relation with nature, and its distinctive cosmovision.

In this regard, biocultural diversity discourse can be used by indigenous communities as a counter-narrative to the dominant one. In fact, as presented in Chapter 3, this discourse can support the recognition of indigenous epistemology into the public debate, particularly, for the definition of the strategies and the objects of conservation. Chapter 7 deals with the complex interplay among effective enjoyment of collective rights, official conservation policy and impact of conservation discourse into the legal field. To address this topic, I rely on a case-study. The case-study shows how an indigenous community has vernacularized biocultural diversity discourse into the legal strategy and customary law to re-appropriate its territory against the dominant conservation policy imposed by the Mexican state. The latter, based on biodiversity paradigm, had imposed meanings and uses over the territory that were at odds with the community way of life, and that could have compromised they existence as distinctive peoples. Finally, through some examples collected during my filed work, Section 7.7 will offer some insights on the growing role of non-human consistencies -e.g. Mother Earth, corn- into the legal system as a new symbolic field of conflict and emancipation. As I will illustrate, the relationship between human beings and nature is injected into legal struggles and environmental instruments become emancipatory tools to enhance the right to self-determination.

Chapter 4 An Overview of the Mexican Legal System: Indigenous Collective Rights and Indigenous Specificity in Oaxaca

Navigating the entitlement of indigenous collective rights in Mexico is a complex task due to the overlapping of several legal levels: the federal, the state, and the local. The interplay among these three levels is paramount to understand the Mexican system of indigenous collective rights and, ultimately, the multicultural debate in Mexico. This part aims at offering a brief overview of this interrelation; however, the readers should also be aware of the weakness of the Mexican rule of law, which makes the implementation of collective rights contingent and uncertain. The local level, which for the purpose of this work corresponds with the indigenous community, overlaps different norms: from the indigenous customary legal system to the international law, passing through federal laws and programs.

The cultural diversity of the Oaxaca state makes this scenario even more complex. In this matter, Oaxaca presents a large number of indigenous communities belonging to 15 different ethnic groups; therefore, each indigenous community presents a distinctive way of life, culture, legal system, and political project. For all these reasons, Oaxaca is one of the most cultural diverse areas in the planet and a complex ‘object’ for analysis that want to avoid essentialization.

For this reason, in Chapter 7, I will rely on a case-study and on ‘situated insights from the grounds’; however, a level of generalization is needed to offer the readers a broad understanding of the uniqueness of Oaxaca. In this regard, the purpose of this chapter is twofold: offer the readers an overview of the Mexican legal systems on collective rights; and briefly describe the indigenous legal systems, ways of life, with a particular focus on their cosmovision on social and natural relationships. This part is based on prominent literature and interviews collected during my fieldwork.

4.1 From Agrarian Reform to the Pluricultural State. The Evolution of Indigenous Collective Rights in the Mexican Constitution

Mexico is one of the Latin American countries that went through the ‘wave of multicultural constitutional reform’ in the late 1990s-early 2000s.³⁶⁷ Nowadays, Mexico is a pluricultural nation whose constitution guarantees the collective rights of indigenous peoples and recognizes international indigenous human rights norms as part of the constitutional legal framework. The current legal system of protection is the product of a constant search by indigenous groups for a political space to renegotiate their relationship with the state after the colonization. As I will show in the following chapter, this battle did not end with the entitlement of constitutional rights. In fact, embracing a cognitive injustice approach can offer a different level of analysis to understand the effectiveness of the enjoyment of collective rights. In this part, I will provide an overview of the path that led to the current constitutional system of indigenous collective rights.

The adoption of a multicultural constitution represents an important step forward in the political process of renegotiation of the relationship between indigenous peoples and the state. To understand the current constitutional system of rights, this part describe two significant moments that have shaped the recognition of collective rights in the Mexican constitution: the agrarian reform and the peace process after the Zapatista uprising. As I will show, many of the requests of recognition, in particular concerning indigenous cosmovision and epistemology, have not penetrated into the constitution, frustrating the indigenous cultural sovereignty as part of the right to self-determination.

4.2 Agrarian Reform and Redistribution of Land

Following the Mexican revolution (1910-15), the 1917 agrarian reform initiated a policy of redistribution of the lands that were expropriated to indigenous peoples during the colonization. The amendment of Article 27 of the Mexican constitution created a system of land redistribution that was implemented thorough the agrarian legislation. As

³⁶⁷ Van Cott, “Indigenous Peoples’ Politics in Latin America”; Clavero, *Geografía Jurídica de América Latina: Pueblos Indígenas Entre Constituciones Mestizas*.

Rodolfo Stavenhagen points out, during the agrarian reform, about 3 million peasants, most of whom were indigenous peoples, benefited from the redistribution.³⁶⁸ The agrarian law, which regulated the redistribution process, created new institutions and a system of ‘agrarian governance’ that still strongly influence the system of indigenous collective rights in Mexico until today.

The reform permitted indigenous communities to claim their rights over lands only by grouping themselves under one of two landholding arrangements: either the agrarian community or the *ejido*. Indigenous communities that held the *titulo primordial* (original Crown title),³⁶⁹ could constitute themselves as agrarian communities and claim the restitution of their ancestral lands. For those without an original Crown title, they could request the allotment of their lands by constituting themselves as *ejido*. In both cases, the requests were handled by the Agrarian Tribunal (*Tribunal Agrario*), an ad-hoc court created to cope with agrarian controversies and the allocation of agrarian lands.

Under Mexican law, the agrarian community and the *ejido* are juridical subjects with distinct patrimonies and specific systems of governance. In both cases, the lands are communal; however, the communal lands are inalienable and imprescriptible only in the case of agrarian communities. The communal lands of the *ejidos* can be converted into private property.³⁷⁰ The agrarian law establishes the decision-making process and the representative bodies for each type of community, and requires that each adopt a specific legal act to regulate them: the *estatuto communal* (agrarian statute) for the agrarian community and the *reglamento* (regulation) for the *ejido*. For instance, these acts address the use of communal lands and the participation of the members (*comuneros*) in the decision making process.

De facto, indigenous peoples benefited from the agrarian reform and could acquire collective rights over their ancestral lands; however, *de jure*, the constitution did not recognize their specificity or endow them with *sui generis* rights. In fact, as I will

³⁶⁸ Rodolfo Stavenhagen, “Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico,” 2004., para. 9.

³⁶⁹ The *Titulo Primordial* is an original title granted by the Spanish Crown that recognized the ownership of the community over its territory.

³⁷⁰ For an overview on this topic see: Francisco Bárcenas López, *El Régimen de La Propiedad Agraria En México. Primeros Auxilios Jurídicos Para La Defensa de La Tierra Y Los Recursos Naturales* (Centro de Orientación y Asesoría a Pueblos Indígenas A.C., Centro de Estudios para el Cambio en el Campo Mexicano, Instituto Mexicano para el Desarrollo Comunitario A.C., Servicios para una Educación Alternativa EDUCA A.C, 2017).

describe later, in this period Mexico's many indigenous identities were denied, being replaced by a single national ethnic identity: the *mestizo* (Section 5.2).

As the Mexican indigenous lawyer and activist Francisco Bárcenas López argues, the 1917 reform did not take into account indigenous specificity, on the contrary required them to embrace the juridical form of agrarian entities –agrarian community or *ejido*- to claim their territory.³⁷¹ Furthermore, the state retained the ownership over the subsoil and the water, reproducing a colonial pattern of property rights.³⁷² This specific aspect of the history of the indigenous re-apportionment of ancestral land has influenced the current juridical and political status of many indigenous communities in Oaxaca. The constitutional recognition of indigenous peoples occurred only in the 1990s; and, as demonstrated below, it was accompanied by some restrictions.

4.3 Pluricultural State and Indigenous Collective Rights in the Mexican Constitution

In 1992, for the first time, the Mexican Constitution (Constitution) acknowledged the existence of indigenous peoples as part of the fabric of the national states. As some commentators point out, this occurred due to the Mexican commitment to recognize indigenous rights following the ratification of the Interantional Labour Organization (ILO) 169 Convention.³⁷³ Amended Article 4 of the Constitution recognized the pluricultural composition of the national state based on the presence of indigenous peoples. However, this recognition was not accompanied by the entitlement of substantive collective rights. The Constitution did not grant indigenous peoples and indigenous communities the status of legal subjects. Moreover, the *Mana Carta* relegated the recognition of indigenous collective rights to secondary legislations.

Contemporary with the reform of Article 4, the Mexican parliament amended Article 27 of the constitution. After the adoption of NAFTA, the Mexican government embraced several economic reforms to meet the needs of the neoliberal market. As part

³⁷¹ Francisco Bárcenas López, *Legislación Y Derechos Indígenas En México* (Centro de estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria ,Cámara de Diputados, LXI legislatura, 2010).

³⁷² Ibid.

³⁷³ Magdalena Gómez, *Derecho Indígena* (INI, 1997).

of this agenda, the reformed Article 27 allowed for the alienation of the *ejidos*' communal lands, jeopardizing the indigenous collective land tenure system.

A proper constitutional multicultural turn occurred after the armed uprising of the Zapatista National Liberation Army (EZLN). The process of reconciliation and dialogue brought about by the armed conflict, opened up a new political phase. In 2001, the signature of the San Andrés Agreements on Indigenous Identity and Culture by the Government and EZLN was an important moment in which indigenous peoples could engage in a dialogue to redefine their relationship with the state. This dialogue led to a proposal of constitutional reform drafted by the *Comisión de Concordia y Pacificación* (Concord and Pacification Commission- COCOPA) and approved by both parties. However, the Mexican Government did not comply with the agreement and many of the negotiated provisions were frustrated by the Constitutional reform adopted in 2001.³⁷⁴

Among these, were the recognition of indigenous cosmovision, cultural sovereignty and political autonomy.³⁷⁵ As Magdalena Gómez argues, the constitutional reform was flawed, because the main political forces were unwilling to engage in an effective inter-cultural dialogue with indigenous peoples and incorporate their requests.³⁷⁶ As the author points out, this aspect emerged even more when the Mexican Constitutional Court ruled that indigenous groups lacked standing to petition the government to repeal the reform for lack of consultation.³⁷⁷

Even if this reform did not mirror the original agreement between the EZLN and the government, it contained some important innovations. Article 2 is central in defining indigenous collective rights. It reads:

The Mexican nation is unique and indivisible.

³⁷⁴ The reform concerned arts: 1; 2; 4; 18.6; 27.VII.2; 115.3. Mexican Constitution Reform, august 14, 2001.

³⁷⁵ Art 4 V. "Acceder de manera colectiva al uso y disfrute de los recursos naturales de sus tierras y territorios, entendidos éstos como la totalidad del hábitat que los pueblos indígenas usan u ocupan, salvo aquellos cuyo dominio directo corresponda a la Nación; VI. Preservar y enriquecer sus lenguas, conocimientos y todos los elementos que configuren su cultura e identidad, y La federación, los estados y los municipios deberán, en el ámbito de sus respectivas competencias, y con el concurso de los pueblos indígenas, promover su desarrollo equitativo y sustentable y la educación bilingüe e intercultural. Asimismo, deberán impulsar el respeto y conocimiento de las diversas culturas existentes en la Nación y combatir toda forma de discriminación." Reformas Constitucionales Propuesta de la Comisión de Concordia y Pacificación 29 de noviembre de 1996.

³⁷⁶ Magdalena Gómez Rivera, "Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance," *Nueva Antropología* 26, no. 78 (2013): 43–62.

³⁷⁷ Ibid.

The nation has a pluricultural composition based originally on its indigenous tribes described as descendants of the people that lived in the current territory of the country at the beginning of the colonization and that preserve their own social, economic, cultural, political institutions.

Consciousness of indigenous identity will be the fundamental criteria to determine to whom apply the provisions on indigenous people.

An indigenous community is defined as the community that constitutes a cultural, economic and social unit settled in a territory and that recognizes its own authorities, according to their used and customs.

Indigenous peoples' right to self-determination shall be subjected to the Constitution in order to guarantee national unity.

The constitutions and laws of the Federal District and of the States shall recognize indigenous peoples and communities and shall also include the general principles established in the previous paragraphs of this Article, as well as ethnic-linguistic and land settlement criteria.³⁷⁸

This article offers the definition of indigenous peoples and indigenous community. Indigenous peoples are descendants of the peoples that lived in the current territory of the country at the beginning of the colonization and that preserve their own social, economic, cultural, and political institutions. Indigenous community is a social, economic and cultural unit settled in a territory and having its own authority based on 'uses and customs'. Furthermore, in line with the international jurisprudence, the article embraces the self-identification criterion for the application of the indigenous *sui generis* regime.

The most important innovation of Article 2 is the recognition of the right to self-determination in the form of the right of self-government. This right needs to be exercised in conformity with the rights enshrined in the Constitution to guarantee national

³⁷⁸ Original text in Spanish: "La Nación Mexicana es única e indivisible. La Nación tiene una composición pluricultural sustentada originalmente en sus pueblos indígenas que son aquellos que descienden de poblaciones que habitaban en el territorio actual del país al iniciarse la colonización y que conservan sus propias instituciones sociales, económicas, culturales y políticas, o parte de ellas. La conciencia de su identidad indígena deberá ser criterio fundamental para determinar a quiénes se aplican las disposiciones sobre pueblos indígenas. Son comunidades integrantes de un pueblo indígena, aquellas que formen una unidad social, económica y cultural, asentadas en un territorio y que reconocen autoridades propias de acuerdo con sus usos y costumbres. El derecho de los pueblos indígenas a la libre determinación se ejercerá en un marco constitucional de autonomía que asegure la unidad nacional. El reconocimiento de los pueblos y comunidades indígenas se hará en las constituciones y leyes de las entidades federativas, las que deberán tomar en cuenta, además de los principios generales establecidos en los párrafos anteriores de este artículo, criterios etnolingüísticos y de asentamiento físico."

unity. The Constitution delegates the implementation of the right to self-determination to state Constitutions and federal legislations.³⁷⁹ Article 2 identifies the minimum content for this right. It specifies that the right to self-determination in the form of the right of self-government entitles indigenous peoples with: the right to decide about their social, political, economic, and cultural organization; the right to apply indigenous legal system; the right to preserve indigenous languages and knowledge, as well as other components of their identity; and the right to access to land in the forms and within the limits established in the Constitution and other laws.

According to Bárcenas the delegation of the implementation of the right to self-determination to state Constitutions and federal legislations can lead to a fragmentation and unequal enjoyment of this right. Not all the Mexican states have recognized the indigenous right to self-determination in their constitutions or have passed specific laws to regulate it.³⁸⁰ Furthermore, the doctrine considers that the lack of constitutional recognition of indigenous peoples or communities as juridical persons is the main obstacle for the effective enjoyment of the right to self-determination.³⁸¹ In fact, the lack of this recognition has strong practical implications for indigenous communities concerning the enjoyment of the right to political autonomy. For instance, they can exercise this right only through existing political institutions – e.g. the *municipio*- or other recognized entities- e.g. agrarian communities and *ejidos*. However, the physical boundaries of indigenous territories rarely coincide with the boundaries of these political entities, a lack of correspondence that frustrates indigenous political aspirations.

Commentators have also indicted other weakness in the constitutional system of recognition of collective rights.³⁸² For instance, the constitution does not recognize the

³⁷⁹ In this matter, the Mexican Constitutional Court stated that the rights enshrined in the Constitution are a minimum guarantee that the states need to comply with. Novena Época, Instancia: Segunda Sala, Fuente: Semanario Judicial de la Federación y su Gaceta, Tomo: XVI, Noviembre de 2002 Tesis: 2a. CXXXIX/2002, página: 446, Materia: Constitucional Tesis aislada.

³⁸⁰ Francisco Bárcenas López, *Legislación Y Derechos Indígenas En México* (Centro de estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria, Cámara de Diputados, LXI legislatura, 2010).

³⁸¹ Jorge Alberto González Galván, “La Reforma Constitucional En Materia Indígena,” *Cuestiones Constitucionales* 7 (2002).

³⁸² Bárcenas López, *Legislación Y Derechos Indígenas En México*; Magdalena Gómez Rivera, “Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance,” *Nueva Antropología* 26, no. 78 (2013): 43–62.

right to Free Prior Informed Consent (FPIC), which has become a core tool to fight against the development of neoliberal projects.³⁸³

Finally, the drafters of the Constitution were very parsimonious in incorporating indigenous cosmovision as a criterion for the definition of the content of the indigenous collective rights. For instance, the Constitution does not embrace the indigenous unique views of their dominion over ancestral territory. In recognizing indigenous territorial rights, the *magna carta* embraces an idea of land that does not correspond with the indigenous definition of territory. As I will describe in Section 4.7, indigenous idea of territory cannot be reduce to a physical space but embraces a spiritual and relational dimention.

The proposal reform of the COCOPA, which was already product of negotiation, attempted to regulate this aspect, embracing a more holistic view of the territory. The draft of Article 2 conceived indigenous territory “as the totality of the habitat that the indigenous peoples use and occupy.”³⁸⁴ In the current constitution, this provision has been changed. It entitles the indigenous peoples with the right to self-determination to “conserve and improve the habitat and preserve the integrity of their lands according to the limits established in this constitution”.³⁸⁵ This provision shows the drafters’ resistance to include indigenous epistemology in the nation-building process that followed the Zapatism uprising. On the contrary, the current Article 2 establishes an obligation on indigenous peoples to conserve and improve their habitat; a burden that it is not imposed on any other group in society.

This system of contradictions, concessions, and limited recognitions reveals the Constitution to be a fragile compromise that does not recognize the cultural sovereignty as a component of the right to self-determination. On this point, Jorge Alberto González Galván argues that the costitutional reforms seems to stand between the old assimilationist

³⁸³ Bárcenas López, *Legislación Y Derechos Indígenas En México*; Gómez Rivera, “Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance,” 2013.

³⁸⁴ Art. 4 of the Reformas Constitucionales Propuesta de la Comisión de Concordia y Pacificación 29 de noviembre de 1996.

³⁸⁵ Art. 2. A.V “Conservar y mejorar el hábitat y preservar la integridad de sus tierras en los términos establecidos en esta Constitución.”

approach based on a mono-ethnic identity and a multicultural approach based on the recognition of the pluricultural identity.³⁸⁶

Many constitutional provisions concerning the state obligations to implement the right to self-determination focus on the need to support and increase indigenous economic productivity to fight against poverty. These norms are based on a specific construction of indigenous peoples as poor farmers in need of support. On this point, Gomez points out that, in passing the constitutional reform, many members of the parliament were more concerned in embracing a policy against poverty than recognizing indigenous autonomy.³⁸⁷ As the author argues, Article 2.B is the product of the integration into the constitution of the ‘indigenist policy’.³⁸⁸ In other words, the constitution incorporated a policy towards indigenous peoples that is based on a construction of them as poor farmers in need of government aid, instead of integrating a system of effective recognition of their requests as expressed in the San Andrés agreement. In this context, the indigenous cultural sovereignty succumbed before the perpetuation of a policy that embodied the canon of modernization to overcome poverty.

Despite this scenario, an important achievement for the recognition of indigenous collective rights occurred in June 2011, when Mexico reformed Article 1 of the Constitution, introducing an important advancement for indigenous rights. Amended Article 1 incorporates human rights norms included in the international treaties that Mexico has ratified into the Mexican legal framework.³⁸⁹ In particular, they are considered equivalent to constitutional norms.³⁹⁰ Moreover, Article 1 requires that these norms need to be interpreted according to the Mexican constitution and the international law system. Thus, Article 1 has the potential to effectively bridge the gaps in the protection of indigenous collective rights, allowing the application of the international indigenous human rights standards.

³⁸⁶ Jorge Alberto González Galván, “La Reforma Constitucional En Materia Indígena,” *Cuestiones Constitucionales* 7 (2002).

³⁸⁷ Magdalena Gómez Rivera, “Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance,” *Nueva Antropología* 26, no. 78 (2013): 43–62.

³⁸⁸ Ibid.

³⁸⁹ Mexico ratified the most relevant international human rights treaties, including: the Convention on the Elimination of All Forms of Racial Discrimination (1975); International Covenant on Economic Social and Cultural Rights (1981), the International Covenant on Civil and Political Rights (1981); the Convention on the Elimination of all Forms of Discrimination Against Women (1981).

³⁹⁰ Bartolomé Clavero, “Constitucionalización Mexicana de Los Derechos Humanos, Inclusive Los Derechos de Los Pueblos Indígenas,” *Revista Española de Derecho Constitucional*, 2013, 181–99.

For the time being, the juridical bodies are the only entries that can guarantee an implementation and interpretation of indigenous collective rights according to international standards. Unfortunately, so far, the high level of impunity, corruption, and violence in Mexico, have adversely affected the juridical implementation of collective rights. In spite of this, in recent years, there has been an increase in the number of cases decided by national courts on indigenous collective rights. Moreover, since late 2000s, the Mexican Supreme Court has engaged more with the recognition of these rights, adopting two protocols for the implantation of indigenous collective rights in court.³⁹¹ These practical guidelines for judges, interpret the constitutional rights of indigenous peoples according to the international jurisprudences, in particular the Inter-American Court on Human Rights.

To sum up, the lack of recognition of indigenous peoples/indigenous communities as legal subjects has limited the indigenous right to self-government and political autonomy. As I will show in the following section, this lack of recognition of indigenous peoples as political entities has been partially bridged by some indigenous communities in Oaxaca through their *de jure* recognition as agrarian communities and/or municipal held on indigenous customary law. Furthermore, the Constitution has not incorporated some indigenous requests concerning their distinctive cosmovision, such as their idea of territory. Therefore, the Constitution does not effectively implement the right to self-determination through the recognition of indigenous cultural sovereignty as other Latin American constitutions do. The Bolivian and the Ecuadorian Constitutions integrated into the fabric of the state some important expressions of indigenous ways of life. For instance, the right of Mother Earth, recognized in the Bolivian constitution, is expression of the indigenous distinctive way of approaching the relationship between nature and human beings.

Some of the above-mentioned challenges have been partially addressed in the Oaxacan legal system. This latter contained the most advance system of recognition of indigenous right to self- determination in Mexico.

³⁹¹ Suprema Corte de Justicia de la Nación, Protocolo de Actuación para Quienes Imparten Justicia en Casos Relacionados con Proyectos de Desarrollo e Infraestructura, 2014; Suprema Corte de Justicia de la Nación, Protocolo de Actuación para Quienes Imparten Justicia en Casos que Involucren Derechos de Personas, Comunidades y Pueblos Indígenas, 2014.

4.4 The State of Oaxaca: Setting the Scenario

Oaxaca is the most culturally diverse state in Mexico; 40 percent of the population of Oaxaca is indigenous, as compared to 18.7 per cent of the entire national population of Mexico.³⁹² There are fifteen distinct Oaxacan indigenous groups: *Amuzgos*, *Cuicatecos*, *Chatinos*, *Chinantecos*, *Chocholtecos*, *Chontales*, *Huaves*, *Ixcatecos*, *Mazatecos*, *Mixes*, *Mixtecos*, *Nahuas*, *Triques*, *Zapotecos* and *Zoques*.³⁹³ These groups speak about 60 different languages³⁹⁴ belonging to 16 diverse linguistic classes.³⁹⁵ Indigenous peoples live in 8 economic and geographic regions of the state of Oaxaca: Mixteca, Sierra Norte, Sierra Sur, Valles Centrales, Golfo, Canada, Costa, Ismo;³⁹⁶ each of these groups has its own unique culture, society, and economy.³⁹⁷

Oaxaca is unique among Mexican states, partly because post-colonization, many indigenous communities in the state re-appropriated control over some part of their ancestral territories. As a result, about 80 per cent of the land area of Oaxaca is under a communal tenure land regime; about 22 percent is held by 817 *ejidos* and 58 percent is held by 710 agrarian communities.³⁹⁸ Furthermore, Oaxaca contains 570 municipalities (23 per cent of Mexico's municipalities) 418 of which are governed according to indigenous legal systems. The pervasive preservation of indigenous influences has allowed indigenous residents of Oaxaca to exercise their right to autonomy at a faster pace than in other Mexican states. In fact, in the case of Oaxaca there is an overlap among indigenous community, agrarian community and political entity (municipality).

Four mountain ranges converge in Oaxaca: Sierra Madre del Sur, Sierra Madre de Oaxaca, Sierra Norte and Sierra Altravesada. This rugged terrain prevented colonizers

³⁹² EDUCA, "Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca" (Oaxaca, 2004).

³⁹³ Art. 16 Oaxaca State, *Constitucion Politica del Estado Libre Y Soberano de Oaxaca*, bando solemne 4 April, 1922, last amendment 9 August, 2017.

³⁹⁴ EDUCA, "Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca".

³⁹⁵ Alicia Barabás and Miguel Alberto Bartolomé, *Etnicidad Y Pluralismo Cultural: La Dinámica Étnica En Oaxaca.*, *Colección Regiones*, 1990., p 14.

³⁹⁶ María Luisa. Acevedo Conde, *Geografía Histórica de Oaxaca* (Gobierno Constitucional del Estado de Oaxaca, Secretaría de Asuntos Indígenas, 2002).

³⁹⁷ Barabás and Bartolomé, *Etnicidad Y Pluralismo Cultural: La Dinámica Étnica En Oaxaca*.

³⁹⁸ L Merino-Pérez and Gerardo Segura-Warnholtz, "Las Políticas Forestales Y de Conservación Y Sus Impactos En Las Comunidades Forestales En México," in " *Los Bosques Comunitarios de México. Manejo Sustentable de Paisajes Forestales*, ed. David B. Bray and L Merino-Pérez (Instituto Nacional de Ecología, 2007), 21–49.

from penetrating deeply into indigenous territory and convinced the Spanish Crown to defer city-building in favor of exploiting Oaxaca's natural resources. The Spanish monarchy entered into treaties with the indigenous population that recognized their right to hold and cultivate land, a right referred to as *titulo primordial* (original title). After the agrarian revolution, *titulo primordial* allowed many indigenous groups to re-appropriate of their lands under the legal guise of agrarian communities.³⁹⁹

Oaxaca is unique among Mexican states in its legislative preservation of indigenous self-determination. Even the newly minted Oaxacan state granted a form of autonomy to indigenous peoples. The 1824 *Ley Orgánica para el Gobierno del Estado de Oaxaca* and the 1825 Oaxaca Constitution recognized indigenous peoples' right to self-government throughout municipalities and *republicas*.⁴⁰⁰ This historical background makes unique the relationship between Oaxaca State and indigenous peoples vis-à-vis the rest of Mexico. In this regard, Oaxaca is the Mexican state that has advanced the most the legislation on indigenous self-determination and collective rights.

4.5 Indigenous Peoples and Collective Rights in Oaxaca

The state of Oaxaca has recognized indigenous collective rights previously of the federal multicultural reform and currently the Oaxaca legislation is the most advanced in this matter in Mexico. As describe above, since the XX century, the Oaxaca constitution and legislation have recognized the indigenous peoples. In the 1990s, started a face of re-negotiation of the relationship between the state and indigenous peoples in the framework of the border debate on multicultural reforms led by the ratification of the 169 ILO convention, the amendment of Article 4 of the federal Constitution, and the Sant' Andres agreement. The multicultural turn of the Oaxaca state legislation incorporates the specificity of different ethnic groups that already enjoyed some forms of political and social recognition.

³⁹⁹ Gonzalo Báez-Jorge. Aguirre Beltrán, *Regiones de Refugio: El Desarrollo de La Comunidad Y El Proceso Dominical En Mestizoamérica* (Mexico: Universidad Veracruzana Instituto Nacional Indigenista Gobierno del Estado de Veracruz Fonod de Cultura Económica, 1991); Acevedo Conde, *Geografía Histórica de Oaxaca*.

⁴⁰⁰ Bárcenas López, *Legislación Y Derechos Indígenas En México*.

As Juan Carlos Martínez points out, between 1990 and 1998, the State of Oaxaca passed several reforms to modify the constitution and adopted laws that regulate a vast range of topics, including: legal pluralism, bilingual and intercultural education, and recognition of indigenous cultural specificity.⁴⁰¹ For instance, preceding any other states, in 1995 the reform of the *Código de Instituciones Políticas y Procedimientos Electorales de Oaxaca* (political institutions and electoral procedural code) recognized a procedure for municipal political elections based on the indigenous legal system.⁴⁰²

Some constitutional dispositions reconcile indigenous practices with a more recent approach of human rights that accommodates different epistemologies.⁴⁰³ For instance, Article 12 of the 1990 Constitution recognized the legality of the *tequio* (defined as mandatory work by all able-bodied men, and in some cases women, for the benefit of the community) (see Section 4.7) as an expression of solidarity based on the use of each indigenous community rather than a labor activity that violated the individual right to freedom from forced labor.

In 1990, well before the federal Constitution did so, the Oaxaca Constitution recognized the pluricultural composition of the state in 1990. Article 16 entitles indigenous peoples to self-determination, and recognizes indigenous communities as legal subjects of public law. As Ariel Morales explains, however, this recognition is only *de jure*. In practice, indigenous communities have never been recognized as decentralized political institutions such as *municipios* and *agencias*.⁴⁰⁴ The *Ley de Derechos de los Pueblos y Comunidades Indígenas del Estado de Oaxaca* (Indigenous Peoples and Communities Rights Act- Indigenous Act) establishes that: "La autonomía de los pueblos y comunidades indígenas se ejercerá a nivel del municipio, de las agencias municipales,

⁴⁰¹ Juan Carlos Martínez, "Oaxaca: Un Paso Atrás. Reforma Neoliberal Y Regresión En El Reconocimiento de Derechos Autonómicos de Los Pueblos Indígenas: El Caso de Tlahuitoltepec," in *Justicias Indígenas Y Estado: Violencias Contemporáneas*, ed. María Teresa Sierra, Rosalva Aída Hernández, and Rachel Sieder (FLACSO Mexico/CIESAS, 2013), 123–56.

⁴⁰² LVI Legislatura del Estado de Oaxaca Gran Comisión, "Derechos Indígenas en la legislación Oaxaqueña", 1998.

⁴⁰³ Scholars have criticized the 'human rights model' to be based on Western legal principles; therefore to not properly accommodate different epistemologies.

⁴⁰⁴ Interview Ariel Morales Reyes, November 16 2016 Oaxaca. File with the author.

agencias de policía o de las asociaciones integradas por varios municipios entre sí, comunidades en sí o comunidades y municipios".⁴⁰⁵

The Indigenous Act is the most advanced legislation on recognition of indigenous right to self-determination and collective rights in Mexico. The Indigenous Act was adopted in 1998, as the product of a dialogue and debate among indigenous communities and the Oaxacan State during the 1990s. This debate was influenced by the adoption of the ILO 169 and the Sant'Andreas Agreement, as well as by a process of consultation with indigenous peoples of Oaxaca.⁴⁰⁶

The most innovative provisions of the Oaxacan Indigenous Act include Article 3.IV, which recognizes indigenous cultural sovereignty and Article 16 seeks to redress the cultural offenses of the colonial past. Article 3. IV identifies indigenous cultural sovereignty as one component of the right to self-determination; it states:

La expresión de la libre determinación de los pueblos y comunidades indígenas como partes integrantes del Estado de Oaxaca, en consonancia con el orden jurídico vigente, para adoptar por sí mismos decisiones e instituir prácticas propias relacionadas con su cosmovisión, territorio indígena, tierra, recursos naturales, organización sociopolítica, administración de justicia, educación, lenguaje, salud, medicina y cultura.⁴⁰⁷

This principle is further developed in Article 17 of the Oaxacan Indigenous Act, which recognizes the right to “vivir dentro de sus tradiciones culturales y en libertad, paz

⁴⁰⁵ “The autonomy of the indigenous peoples and communities shall be exercised at the level of the municipality, the agencies or the associations composed by communities or communities and municipalities.” (My translation). Jorge Alberto González Galván, “La Reforma Constitucional En Materia Indígena,” *Cuestiones Constitucionales* 7 (2002).

⁴⁰⁶ The consultation took place in 1996, when the Oaxaca congress created the national consultation on the rights and participation of indigenous peoples (Consulta Nacional sobre Derechos y Participación Indígena). On February 16-18, 1996, in the City of Oaxaca, as part of the consultation process, it was organized a colloquium on the rights of indigenous peoples (Coloquio sobre Derechos Indígenas). The conclusive paper of the colloquium mirrored the requests of the indigenous peoples of Oaxaca. Oaxaca State, “Exposición de Motivos”, *Ley de Derechos de los Pueblos Y Comunidades Indigenas del Estado de Oaxaca*, June 19, 1998.

⁴⁰⁷ “The expression of the self-determination of the indigenous peoples and communities as members of the state of Oaxaca, subject to legal system in force, to adopt their own decisions and establish their own practices in accordance to their worldview, indigenous territory, land, natural resources, sociopolitical organization, system of justice, education, language, health, medicine and culture.” (My translation). Art. 3.IV, Oaxaca State, *Ley de Derechos de los Pueblos Y Comunidades Indigenas del Estado de Oaxaca*, June 19, 1998.

y seguridad como culturas distintas y a gozar de plenas garantías contra toda forma de discriminación.”⁴⁰⁸ This embraces an idea of equality based on the recognition of the difference and cultural integrity. Furthermore, Article 26 enshrines the right of indigenous peoples to protect and control their cultural heritage and cultural property. Additionally, Article 3.V promotes a holistic approach in defying indigenous territory:

Territorio Indígena: Porción del territorio nacional constituida por espacios continuos y discontinuos ocupados y poseídos por los pueblos y comunidades indígenas, en cuyos ámbitos espacial, material, social y cultural se desenvuelven aquellos y expresan sus forma (sic) específica de relación con el mundo, sin detrimento alguno de la Soberanía Nacional del Estado Mexicano ni de las Autonomías del Estado de Oaxaca y sus Municipios.⁴⁰⁹

Finally, the Indigenous Act contains some provisions whose goal is to reverse the adverse effects of colonial Mexico’s assimilationist policies. For instance, Article 16 defines the crime of ethnocide as the result of assimilationist practices. Moreover, Article 23 recognizes the right to revitalize, use, develop, and transmit indigenous culture expressed in: “historias, lenguas, tecnologías, tradiciones orales, filosofías, sistema de escritura y literatura, así como a utilizar su toponimia propia en la designación de los nombres de sus comunidades, lugares y personas en sus propias lenguas.”⁴¹⁰

To sum up, Oaxacan legislation on indigenous rights represents an important advancement in the multicultural debate in Mexico. However, as Chapter 5 will show, it has yet to be implemented in practice.

⁴⁰⁸ “to live within their cultural traditions and in freedom, peace and security as distinct culture and enjoy the full protection against any forms of discrimination.” (My translation). Art. 17, *Ley de Derechos de los Pueblos Y Comunidades Indigenas del Estado de Oaxaca*.

⁴⁰⁹ “Indigenous territory: part of the national territory constituted by continuous and discontinuous spaces, occupied or possessed by indigenous peoples and communities, in whose material, social and cultural spaces indigenous peoples develop and express their specific way of life, without limiting the federal sovereignty or the state and municipal autonomy.” (My translation). Art. 3.V, *Ley de Derechos de los Pueblos Y Comunidades Indigenas del Estado de Oaxaca*.

⁴¹⁰ “stories, languages, technologies, oral traditions, philosophies, writing and literature systems, as well as the use of their own toponymy in the designation of the names of communities persons in their own languages.” (My translation). Art. 23 *Ley de Derechos de los Pueblos Y Comunidades Indigenas del Estado de Oaxaca*

4.6 An Overview on the Indigenous Customary System in Oaxaca

In this section, I offer a brief overview of the indigenous customary system. Given the vast diversity of the indigenous communities in Oaxaca, this part can only present a summary account of this complex panorama. Based on collected documents and interviews, as well as literature, I describe the main institutions that regulate indigenous communities;⁴¹¹ then, I offer a general overview of the indigenous legal system. I will describe a specific legal instrument: the *estatuto comunal* (Communal Statute) and will demonstrate in Chapters 5, 6, and 7, how it facilitates the impact of conservation discourses on indigenous collective rights.

As I described in Section 4.4, in the case of Oaxaca, a large number of indigenous communities are recognized as municipalities (or other local political institutions –e.g., *agencia municipal*) and/or agrarian communities. This peculiarity has allowed them to exercise some forms of self-government. In particular, both the municipalities and the agrarian communities are regulated based on indigenous customary systems. To illustrate the indigenous customary system, I need to introduce three core institutions: the General Assembly, the *tequio*, and the *servicio gratuito* (system of unpaid communal functions).⁴¹²

The General Assembly is the main communal body that represents the will of the community. As Jaime Luna Martínez points out, the Assembly is not power but authority. In the Assembly, the participants broadly discuss each decision in order to achieve an agreement that the entire community will implement.⁴¹³ As one of the interviewees told me, these decisions are respected because the Assembly is *sabia* -wise. The Assembly presides over relevant aspects of the community, from the development of communal life to stewardship and defense of the territory.⁴¹⁴ Another trait of this deliberative system is

⁴¹¹ This part is mostly based on the experience of the indigenous communities in the *Sierra Norte* and Isthmus where I spent most of the time during my fieldwork.

⁴¹² In this dissertation, I have not analyzed the role of the women in the indigenous communities. In order to analyze their role, I would have to illustrate the family as an institution and the system of communal functions performed by women. Furthermore, I would have to navigate the recent changes occurring within many indigenous communities. For the purpose of this work it is sufficient the general description of the indigenous system offered in this paragraph, leaving the examination of the role of women to future investigations.

⁴¹³ Interview with Martínez Luna Jaime, November 28, 2016 City of Oaxaca. File with author.

⁴¹⁴ Art. 8, Estatuto Comunal, Magdalena Teitipac, May 9, 2015.

the uncertainty- versus the certainty that connotes the Western legal system. In fact, the decisions of the Assembly are not static, but can change over time to adjust to the circumstances and the needs of the members of the community.⁴¹⁵ Each community regulates the composition of the Assembly according to its own legal system. Based on the experience of the indigenous communities in the *Sierra Norte*, the Assembly is composed of the ‘*ciudadanos*’ (citizens).⁴¹⁶ Citizens are those members who serve the community by performing *tequio*.

As stated above, *tequio* is communal work by all able-bodied men and in some case women for the benefit of the community.⁴¹⁷ The *tequio* cannot be reduced to free or voluntary labor. In fact, it has a deep meaning and value for indigenous communities, both because it identifies the members of the community and because it is a form of socialization. *Tequio* expresses solidarity and reciprocity based on the customary system. According to some interviewees, the *tequio* is communal harmony and strength; it is compulsory, but not forced because is part of the societal coexistence. Finally, it is both a ‘thermometer’ to test the behavior of the citizens,⁴¹⁸ and a recreational activity.⁴¹⁹ The Assembly decides how to employ the *tequio*, -from repairing of public buildings and roads to managing the forest. Another important institution linked to the *tequio* is the *servicio gratuito* (system of unpaid communal functions).

The customary system requires that men- in some community also women- who turn 18 are assigned very simple roles, such as the *topil* (bailiff) or *calvero de la iglesia*. Only after having completed simple tasks, they are permitted to hold more complex positions, such as: *Regidor Municipal* (Municipal Councilor) *Comisariado De Bienes Comunales* (Commissioner for Communal Goods), and *Presidente Municipal* (President of the Municipality). This system, called *escalafón* (promotion ladder), allows each person to be socialized and to learn the needs of the society and its rules by engaging in communal life, starting from the simplest tasks. Through this system, the community

⁴¹⁵ Interview with Martínez Luna Jaime, November 28, 2016 City of Oaxaca. File with author.

⁴¹⁶ In this part, I rely mostly on interviews conducted in Capulálpam de Méndez. In other communities, the eligibility criteria to participate in the Assembly can be different.

⁴¹⁷ Laura Nader, *Harmony Ideology: Justice and Control in a Zapotec Mountain Village* (Stanford University Press, 1991).

⁴¹⁸ Jaime Luna Martínez, *Eso Que Llamam Comunalidad* (Oaxaca: Colección Diálogos, 2010).

⁴¹⁹ Sofía Robles Hernández and Rafael Cardoso Jiménez, eds., *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*, Vol. 14 (UNAM, 2007).

members internalize their civil duties and responsibilities to better serve their community. This ‘communal learning system’ is totally separate from the Mexican official education system. In fact, members that hold a degree or a diploma are not excluded from the promotion ladder to service communal functions.

The Assembly appoints the members to perform communal functions-from *topil* to municipal and agrarian authorities- based on the work conducted in the community and the promotion ladder system. The municipal bodies are appointed for 18 months. They include, the President of the municipality and several *regidores* (Councilors), who deal with specific topics, from ecotourism to agriculture. Moreover, the Assembly designates the *Comités de la Comunidad* (Community Committees), which coordinate with the municipal authority and make decisions on topics of public interest and communal work.⁴²⁰ Each committee deals with specific affairs, such as school, health, and *fiesta*. Another important authority is the *Consejo de Caracterizados or Ancianos* (Council of Elders), composed of members who have accomplished high functions in the community. This body resolves community disputes and, provides advice at the request of the Assembly.

The agrarian authorities are appointed for three years and are the *Comisariado de Bienes Comunales*, (Commissioner for Communal Goods), and the *Consejo de Vigilancia* (Council of Vigilance). The *Comisariado de Bienes Comunales* represents the community before state and federal authorities. It is composed of a president, a secretary, a treasurer, and some alternates. The *Comisariado* is in charge of the management, control, and conservation of the communal territory. It implements the Assembly’s decisions on such matters as how to use the communal territory, access to communal resources, use of funds and management of the forest. In some communities, it grants permission for conducting research in the communal territory. The *Consejo de Vigilancia* supervises the activities of the *Comisariado*. Particularly, it guarantees that the *estatuto comunal* and the customary norms are properly observed. It is composed of a president, a secretary and some alternates.⁴²¹

According to some scholars, one of the main characteristics of the indigenous communities in Oaxaca is their ability to adapt their traditions and institutions to

⁴²⁰ Art. 40, Estatuto Comunal, *Santiago Lachiguiri*.

⁴²¹ Art 22-33, Art. 40, Estatuto Comunal, *Santiago Lachiguiri*.

circumstances and historical contingences.⁴²² This has created a mosaic of different communities.⁴²³ As Salvador Aquino points out, indigenous institutions, such as the *Comisariado de Bienes Comunales*, have changed over time to cope with a complex overlapping state laws and programs. For instance, in recent years, indigenous institutions have adapted to transformations occurred in the environmental sector.⁴²⁴

For example, at the end of the 1980s, following the federal government's issuance of logging concessions over indigenous forests, many communities in Oaxaca created inter-communitarian organizations to re-appropriate control over their resources. Some examples of these organizations are: the *Asembla de Autoridades Mixes* (ASAM), the *Comité de Defensa de Recursos Naturales de la Zona Mixe* (CODREMI), and *Unión de Organizaciones de la Sierra Juárez de Oaxaca* (UNOSJO).⁴²⁵ In more recent years, inter-communal organizations have been constituted to deal with biodiversity conservation, sustainable development and forest management projects. Some examples are: the *Comité de Recursos Naturales de la Chinantla Alta* (CORENCHI),⁴²⁶ *Unión de Comunidades Productoras Forestales Zapotecos - Chinantecos de la Sierra Juárez* (UZACHI),⁴²⁷ and *Sistema Comunitario para el Manejo y Protección de la Biodiversidad* (SICOBİ).⁴²⁸

Furthermore, some communities have created new institutions to deal with emerging topics and threats, such as management of resources, forest conservation, and

⁴²² Robles Hernández and Cardoso Jiménez, *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*; Salvador Aquino Centeno, "Interrogando La Costumbre Y La Legislación Indígena: Contribuciones Y Horizontes de La Antropología Jurídica En Oaxaca," *Nueva Antropología* 26, no. 78 (2013): 87–117.

⁴²³ Robles Hernández and Cardoso Jiménez, *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*.

⁴²⁴ Aquino Centeno, "Interrogando La Costumbre Y La Legislación Indígena: Contribuciones Y Horizontes de La Antropología Jurídica En Oaxaca."

⁴²⁵ Jorge Hernández Díaz, *Reclamos de La Identidad: La Formación de Las Organizaciones Indígenas En Oaxaca* (Miguel Angel Porrua, 2001).

⁴²⁶ For an overview of the role of the CORENCHI and the impact on the area of Chinantla see: David Bray, Elvira Duran, and Oscar Molina, "Beyond Harvests in the Commons: Multi-Scale Governance and Turbulence in Indigenous/community Conserved Areas in Oaxaca, Mexico," *International Journal of the Commons* 6, no. 2 (2012).

⁴²⁷ On the constitution and role of the UZACHI there is a vast literature among others see: Francisco Chapela, "Indigenous Community Forest Management in the Sierra Juárez, Oaxaca," in *The Community Forests of Mexico: Managing for Sustainable Landscapes*, ed. David Barton Bray, Leticia Merino-Pérez, and Deborah Barry (University of Texas Press, 2005), 91–111.

⁴²⁸ On the constitution process of the SICOBİ see: Marco Antonio González and Martha Elena Miranda, "El Sistema Comunitario Para El Manejo Y Protección de La Biodiversidad: Cuenca Huatulco-Copalita, Oaxaca, México," *LEISA Revista de Agroecología*, 2003, 7:9.

protection of communal territory against the development of large scale-projects. Notably, Magdalena Teitipac, a town in the Tlacolula District in the east of the Valles Centrales Region, has created the *Comités por la Defensa de la Integridad Territorial y Cultural* (Committee for the defense and integrity of the territory and culture). The committee promotes among others, the revitalization of the indigenous culture and language, respect for the indigenous legal system, self-development, and the defense of the territory.⁴²⁹ The 2015 *estatuto* introduced this institution in the aftermath of the 2014 uprising of the community against a Canadian mining company that was drilling the community's land without its PFIC.

These indigenous institutions function within the indigenous customary legal system, which consists of the values, principles, norms, and procedures that permit the community to appoint its institutions, regulate relationships within and outside the community, and use its territory and resources.⁴³⁰ The indigenous legal system embraces both oral and written norms. As Aquino argues, in recent years indigenous communities in Oaxaca have worked to create a 'written memory' of their activities.⁴³¹ Consequently, indigenous communities maintain archives on declarations, acts, decisions, etc.⁴³² Staring from the late 1990s, one example of this trend has been the inclusion of the *estatuto comunal* in the indigenous legal system.

As many interviewees reported, originally, the *estatuto comunal* was a formal requirement imposed on agrarian communities by the agrarian law for the purpose of regulating their internal functioning and the use of the land. The communities used to adopt the *estatuto* with the assistance of the personnel of the RAN (National Agrarian Register). This document did not mirror the specificity of the community, on the contrary, it was a highly standardized document promoted by the RAN; therefore, it was just a pro-forma act that had no legal value for the communities. However, in recent years, it has become part of the indigenous legal system. Staring from the late 1990s, the trend to adopt or actualize *estatuto* is in part due to two events. First, human rights NGOs commenced working with indigenous communities to adopt *estatutos* as a legal strategy

⁴²⁹ Arts. 38-40, Estatuto Comunal, *Magdalena Teitipac*.

⁴³⁰ EDUCA, "Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca."

⁴³¹ Aquino Centeno, "Interrogando La Costumbre Y La Legislación Indígena: Contribuciones Y Horizontes de La Antropología Jurídica En Oaxaca."

⁴³² Ibid.

to fight against megaprojects. Second, as I will show in Chapter 6, a conservation program launched in Oaxaca in the 1990s, strongly promoted the actualization or the adoption of the *estatuto* for those communities participating in the program.

Nowadays, as some indigenous members report, the *estatuto* is part of their legal system and contains customary law.⁴³³ The *estatuto* not only regulates the use of communal lands for agrarian purpose but also social, legal, economic, and cultural matters.⁴³⁴ According to EDUCA and *Tequio Juirdico*, two indigenous human rights NGOs, indigenous communities have started using the *estatuto* as a legal instrument to defend their territory against large scale projects, and also to regulate other aspects of communitarian life- from identity to gender issues.⁴³⁵ In this regard, during the *Secundo Foro Nacional, Tejiendo La Resistencia Por La Defensa de Nuestros Territorios, Haciendo Memoria, San Juan Jaltepec de Candayoc, Mixe*, 26 indigenous communities declared that they will use the *estatuto comunal* as a tool to defend their resources, lands, and territory.⁴³⁶

Furthermore, the *estatuto* has become an instrument to describe and regulate specific social, economic, and cultural matters. Some *estatutos* illustrate the core aspects of the identity of the indigenous community. For instance, the *estatuto* of the Santiago Teotlaxco defines the meaning of “life in the community”,⁴³⁷ and the *estatuto* of Magdalena Teitipac describes its core institutions, such as, the Zapotec language, the *fiesta*, and the *tequio*.⁴³⁸

Moreover, the *estatutos* may contain provisions that forbid the development of certain activities in the indigenous territory. Some examples are those that ban the use of GMO and/or mining extraction. Finally, some *estatutos* recall not only the agrarian law, but also other norms, particularly, Articles 2 and 27 of the Constitution, as well as the

⁴³³ Among others see the interviews with: Villa Nueva Leonicio and Galvan Toledo Costantino, Santiago Lachiguiri, October 27, 2016; Martínez Netzar, Capulálpam de Méndez, October 20, 2016; Reyes Cosmos Eleazar, Capulálpam de Méndez, October 22, 2016.

⁴³⁴ Ibid.

⁴³⁵ Interviews with: Castro Rodriguez Angelica, EDUCA, City of Oaxaca, September 14, 2016; Reyes Mendez Neftanli, EDUCA, City of Oaxaca, September 14, 2016; Morales Erika, Tequio Juridico, City of Oaxaca, November 15, 2016. File with author.

⁴³⁶ “Secundo Foro Nacional, Tejiendo La Resistencia Por La Defensa de Nuestros Territorios, Haciendo Memoria, San Juan Jaltepec de Candayoc, Mixe, 13 Y 14 de Noviembre 2009” (San Juan Jaltepec de Candayoc, 2009), p. 52.

⁴³⁷ Art. 3, Estatuto Comunal, *Santiago Teotlaxco*.

⁴³⁸ Art. 4, Estatuto Comunal, *Magdalena Teitipac*.

Indigenous Act, as part of their legal foundation. Moreover, some *estatutos* invoke international laws on indigenous collective rights, such as the 169 ILO convention and/or the United Nation Declaration on the Rights of Indigenous Peoples.

To sum up, this part provided a digest of the indigenous institutions and legal system, showing the recent evolution and changes occurred in this field. Its purpose is to offer the readers a general understanding to navigate the argument that I will develop in the following chapters. For the same purpose, the next section will offer a brief account of the indigenous cosmovision/epistemology in Oaxaca.

4.7 *Comunalidad* and Relationship with Nature

The diversity of Oaxacan indigenous communities makes it difficult to provide a general description of the indigenous cosmovision (epistemology). This paper is not an ethnographic work that seeks to offer a detailed account of the experience of these communities. Consequentially, this dissertation offers selected ‘snapshots’ of the indigenous cosmovision in Oaxaca, based on interviews, documents collected during my fieldwork, and declarations issued by indigenous communities and organizations. This section explores the concept of *comunalidad* (communality) as developed by indigenous intellectuals, and explains why it is incompatible with some canons of modernity.

Indigenous intellectuals from Oaxaca have conceptualized indigenous ontology/epistemology through the idea of *comunalidad*. This concept aims to translate the experiences of many Oaxacan indigenous communities to either dialogue with the hegemonic modern model of production of knowledge and make these experiences visible as distinctive ways of existence. As some commentators point out, *comunalidad* is a way to re-appropriate an epistemology that has been oppressed and marginalized for

centuries.⁴³⁹ It represents a distinctive way of life, culture, law, and technology, a defense against the hegemonic model, and a way to explain phenomenology.⁴⁴⁰

Comunalidad was originally conceptualized by two indigenous intellectuals, Mixe Filiberto Díaz and Zapotec Jaime Luna Martínez; and has become part of the vernacular of many indigenous peoples in Oaxaca. As Díaz describes, *comunalidad* expresses the indigenous ancestral way of life and organization, and provides a ‘space’ in which people realize acts of recreation and transformation of nature. In *communalidad* the primary relationship is that of the people with the Earth, as articulated through work.⁴⁴¹ According to Díaz, *comunalidad* consists of five elements: the Earth, as Mother and as territory; the consensus in assembly for the decision making process; free service as an exercise of authority; collective work as an act of recreation; and rites and ceremonies, as expression of the communal gift.⁴⁴²

This work focuses on the relationship of Oaxacan indigenous peoples with their territory, which is paramount in *comunalidad*. As many authors have stressed, even if indigenous culture is very diverse, the relationship with their territory is shared by all of those cultures.⁴⁴³ As Díaz agrees: “[l]a Tierra es para nosotros una *madre*, que nos pare, nos alimenta y nos recoge en sus entrañas. Nosotros pertenecemos a ella, por eso no somos los propietarios de tierra alguna.... Nuestra madre es sagrada, por ella somos sagrados nosotros.”⁴⁴⁴ Díaz’s conception of the relationship with Earth/Nature is holistic. As the author better explains:

⁴³⁹ Alejandra Aquino Moreschi, “La Comunalidad Como Epistemología Del Sur. Aportes Y Retos,” *Cuadernos Del Sur, Revista de Ciencias Sociales* 8, no. 34 (2013); Cipriano Flores Cruz, “Comentario Al Modulo,” in *EDUCA, Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca, 2003-2004* (EDUCA, 2004).

⁴⁴⁰ Robles Hernández and Cardoso Jiménez, *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*.

⁴⁴¹ Ibid.

⁴⁴² Ibid.

⁴⁴³ Vanessa Strickland Betancourt Posada, Alberto, Tihui Campos Ortiz, Griselda, Efraín Cruz Marín, José, Fritsche, Katja Jeglitzka, Elisabeth, Marion Lloyd, Ana Beatriz Pérez Galvis, Emilio Riva Palacio de Icaza, Marie Andrée Roy, “¿Cuánto Vale La Sabiduría Tradicional? El Papel Asignado a Los Conocimientos de Los Pueblos Originarios En El Capital Natural de México,” in *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas* (UNAM, 2014); Erica-Irene A. Daes, “Indigenous Peoples’ Rights to Land and Natural Resources,” in *Minorities, Peoples and Self-Determination: Essays in Honour of Patrick Thornberry*, ed. Nazila Ghanea-Hercock, Alexandra Xanthaki, and Patrick Thornberry (Martinus Nijhoff Publishers, 2005).

⁴⁴⁴ “The Earth is for us a Mother that give us the birth, feed us and comfort us. We belong to her, this why we own our land.... Our Mother is sacred, and because of her we are sacred as well.” (My translation).

La tierra como territorio da parte de nuestro entendimiento. Cada uno de los elementos de la naturaleza cumple una función necesaria dentro del todo y este concepto de integralidad está presente en todos los demás aspectos de nuestra vida. No es posible separar la atmósfera del suelo ni éste del subsuelo. Es la misma Tierra, como un espacio totalizador. Es en este territorio donde aprendemos el sentido de la igualdad, porque los seres humanos no son ni más ni menos respecto de los demás seres vivos; esto es así porque la Tierra es vida. La diferencia, no la superioridad, de las personas radica esencialmente en su capacidad de pensar y decidir de ordenar y usar racionalmente lo existente.⁴⁴⁵

As Díaz describes, indigenous communities conceive the relationship with Nature/Earth in holistic terms. Therefore, their idea of territory is different from that of land and resources; in fact, it expresses the holistic connection with the earth, as an expression of a distinctive way of life.

Indigenous intellectuals also describe an economy of reciprocity as part of indigenous epistemology. As Luna explains:

En primer lugar, nuestra economía está dirigida hacia dos aspectos: el autoconsumo y la acumulación para la *compartencia* con la comunidad. Consideramos que la tierra nos da lo que necesitamos y que si nos da más producción la debemos compartir, principalmente en las fiestas familiares o en las celebraciones de barrio. De ahí que la acumulación no signifique capitalización sino una oportunidad para hacer comunidad.⁴⁴⁶

The *fiesta* is a core institution in indigenous communities that expresses the reciprocity. In fact, during the *fiesta*, the family shares with the community what it has accumulated during the year. This accumulation can be in the form of products or

Floriberto Díaz Gómez, "Comunidad Y Comunalidad," *Culturas Populares E Indígenas, Cultura Indígena*, 2004, 365: 373., p. 368.

⁴⁴⁵ "The land as territory provides a part of our understanding. Each of the elements of nature serves a necessary function in the totality and this concept of integrality is present in every other aspect of our lives. It is not possible to separate the atmosphere from the ground or the latter from the underground. The Earth is a totalizing space. It is in this territory in which we learn about our sense of equality, since the human beings are nothing more compared to the rest of the other creatures. Thus, the Earth is life. The difference not the superiority of the persons resides essentially in their capacity of thinking and in the decision to order and to use the existing." (My translation). Ibid., p. 368.

⁴⁴⁶ "First, our economy is directed towards two aspects: self-consumption and accumulation for sharing with the community. The Earth gives us what we need and if it happens to produce more than that, we have to share it, mainly, in family gatherings or neighborhood celebrations. Therefore, accumulation does not mean capitalization but an opportunity to create community." (My translation). Luna Martínez, *Eso Que Lllaman Comunalidad.*, pp., 62-63.

incomes from work. A communal body, the *Comité de la fiesta*, is in charge of organizing this important celebrative moment for the community, in which all members participate. Through the *fiesta*, the fruits of work are redistributed and shared with the entire community, in a celebration of solidarity and affiliation.⁴⁴⁷ The fiesta is thus emblematic of indigenous cosmovision's challenge to three main canons of modernity: individualism, separation between nature and culture, and capitalism as the only form of economy and development.

As Martinez points out, *comunalidad* challenges the modern assumption that the individual is the only social and political unit.⁴⁴⁸ *Comunalidad* gives relevance to the collectivity as both a meaningful cultural horizon for the individual and as a connection between nature and human beings.⁴⁴⁹ As Luna argues, the individuality is a construction of the modernity and the idea of reciprocity deconstructs this fiction.⁴⁵⁰ As the philosopher points out: "Ser recíproco es casi lo mismo que depender del otro. Tú das lo que tienes y el otro te da en reciprocidad, lo mismo o algo parecido a lo que diste. Esta es interdependencia, de aquí sostenemos que la independencia individual no existe, que esta es una relación necesaria o natural entre uno y el otro."⁴⁵¹

The other terrain in which the indigenous epistemology challenges modernity is in the construction of the relationship between nature and human beings. If the modern Cartesian model separates nature and culture, the idea of *comunalidad* challenges this assumption. Indigenous peoples defines the relationship with Earth/Nature is conceived in holistic terms. And as Diaz explains:

Los seres humanos entramos en relación con la Tierra de dos formas: a través del trabajo en cuanto territorio, y a través de los ritos y ceremonias familiares y comunitarias, en tanto *madre*. Esta relación no se establece de una manera separada en sus formas, se da normalmente en un solo momento y espacio. . .Es

⁴⁴⁷ Ibid., p. 91.

⁴⁴⁸ Juan Carlos Martínez, "Oaxaca: Un Paso Atrás. Reforma Neoliberal Y Regresión En El Reconocimiento de Derechos Autonómicos de Los Pueblos Indígenas: El Caso de Tlahuilottepec."

⁴⁴⁹ Ibid.

⁴⁵⁰ Jaime Luna Martínez, "Origen Y Ejercicio de La Comunalidad," *Cuadernos Del Sur, Revista de Ciencias Sociales* 18, no. 34 (2013).

⁴⁵¹ Ibid., p. 88.

la relación de la gente con la Tierra la que nos permite definir el concepto de *creador y dador de vida*.⁴⁵²

The territory represents a holistic relationship with nature and a sacred space that cannot be reduced to the Western modern idea of land. Luna explains this points:

[...] el territorio comunal ha sido para los pueblos indígenas no únicamente un patrimonio para su sobrevivencia, sino la fuente misma de su realización cotidiana. La tierra para la comunidad no significa una mercancía, es la expresión profunda de su visión del mundo. La tierra no es una cosa sino la madre misma de la comunidad. El territorio es sagrado y además el espacio para la reproducción de la diferencia. Para la sociedad mestiza la tierra es mercancía y un elemento más de individualidad, de seguridad económica; para los pueblos la tierra es de todos y para las futuras generaciones.⁴⁵³

The holistic relationship with territory has become an object of study by those scholars that have tried to understand the correspondence between certain Western concepts and indigenous languages. For instance, in one study, Hernández illustrates that in the *Tzeltal* language there is no word for conservation. This occurs because in the Mayan culture all the living creatures depend on each other, therefore everything is part of what in Spanish is ‘natural resources’.⁴⁵⁴

According to Bonfil, this holistic dimension can be seen in the difficulty “ [of] separate[ing] what is believed from what is known, myth from historical memory and explanation, and ritual from acts whose practical efficacy has been proven time and again

⁴⁵² “Human beings relate to the land in two ways: as Mother through working the territory, and through rituals, family and community celebrations. This relationship is not established in a separate way to the latter, but in a single moment and space. This relationship of the people with the Earth that allows us to define the concept of creator and life giver”. (My translation). Díaz Gómez, “Comunidad Y Comunalidad.”, p. 368.

⁴⁵³ “...the communal territory has been for the indigenous peoples not only a patrimony for their survival but also the source of their daily realization. The earth for the community does not represent a commodity but the deep expression of their worldview. The earth is not a commodity but the mother of the community. the territory is sacred and moreover, it is the space for the reproduction of difference. For the Meztizo society the earth is a commodity and another element of individuality and economic security; for the indigenous peoples the earth belongs to everybody and to future generations.” (My translation). Luna Martínez, *Eso Que Llamam Comunalidad*., p. 61.

⁴⁵⁴ E. Cruz Betancourt, A., J. Arellano, T. Campos, ed., *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas* (UNAM, 2014). For the incommensurability of the term conservation in Zapotec see: Ivett Peña Azcona, “Percepción Socio Ambiental de Las Áreas Destinadas Voluntariamente Para La Conservación En El Istmo Oaxaqueño” (El Colegio de la Frontera Sur, 2015).

for generations.”⁴⁵⁵ This holistic relationship with the Earth emerges also in the indigenous economy. As Bonfil explains: “in analyzing Indian culture, it is frequently difficult to establish the boundaries between what is economic and what is social.”⁴⁵⁶ In fact, as Luna points out, contrary to the dominant model, the Earth is not conceived as commodity but as Mother of the community and as a deep expression of a distinctive cosmovision.⁴⁵⁷ As described above, the indigenous economy based on the reciprocity aimed at the self-sufficiently and communal sharing.

The modern Eurocentric model has advanced policy that has led to the assimilation of this epistemology. For instance, during the *Secundo Foro Nacional, Tejiendo La Resistencia Por La Defensa de Nuestros Territorios, Haciendo Memoria, San Juan Jaltepec de Candayoc, Mixe*, 26 indigenous communities recognized that the system of development that the mainstream society has imposed on indigenous peoples, has deprived them of their coexistence with Mother Erath and with other peoples.⁴⁵⁸ Based on the idea of progress and capitalistic economic growth, the indigenous economy has been relegated to an expression of backwardness, poverty and marginality, and has therefore been targeted with policies of modernization (see Chapter 5). As Luna argues, the indigenous economy based on self-subsistence, sharing, and reciprocity has been labeled as a form of poverty instead of as an expression of a distinctive epistemology.⁴⁵⁹ For the author, this misrecognition has condemned indigenous peoples to poverty.⁴⁶⁰

Starting from the late 1980s, indigenous scholars,⁴⁶¹ communities,⁴⁶² and organizations⁴⁶³ have started to recover these lost or hidden epistemologies. Their recognition is a central topic in the redefinition of the political relationship with the state.

⁴⁵⁵ Guillermo Bonfil Batalla, *México Profundo : Reclaiming a Civilization, Transaltion from Latin America Series* (University of Texas Press, 1996)., pp. 26-27.

⁴⁵⁶ Ibid., pp. 26-27.

⁴⁵⁷ Luna Martínez, *Eso Que Lllaman Comunalidad*.

⁴⁵⁸ “Secundo Foro Nacional, Tejiendo La Resistencia Por La Defensa de Nuestros Territorios, Haciendo Memoria, San Juan Jaltepec de Candayoc, Mixe, 13 Y 14 de Noviembre 2009.”

⁴⁵⁹ Luna Martínez, *Eso Que Lllaman Comunalidad*.

⁴⁶⁰ Ibid.

⁴⁶¹ Apart from the work of Luna and Diaz, see also: Joel Aquino; Aldo Gonzalez Rojas, “Protuesta de Autonomia Del Bueblo Bëne Xidza,” in *Diez Anos Del Foro “La Globalizacion Y Los Seres Naturales de La Sierra Juarez, Oaxaca, Oaxaca*, ed. S.C. UNSJO, n.d.; Mario Fernando Ramos Morales, “Punto de Partida: Principios de Un Pensamiento Propio” (not published, n.d.).

⁴⁶² Indigenous communities throughout fora or their institutions have issued declarations in which they deal with the recognition of their distinctive epistemology, in the public policy and in the law.

⁴⁶³ See the work of Ser. Mixe; Tequio Juridico.

For instance, the recognition of the territory, as a distinctive way of conceiving the relationship between human beings and nature, has become a central topic in the political struggle of indigenous communities in Mexico. Indigenous peoples have fought to obtain the legal recognition of their way of conceiving the territory. However, this has not occurred in the federal constitution, but only in the Indigenous Act of Oaxaca. As I will develop in the following chapters, this idea of territory has been mistreated and misrecognized in the Mexican policy of conservation of biodiversity. In the next section, I will offer a brief overview of the symbolic value that *maiz* (corn) has acquired in the indigenous epistemological struggle. Particularly, *maiz* has become the symbol of a distinctive relationship between nature and human beings oppressed by the modernization process.

4.8 Recovering Indigenous Epistemologies: Bringing *Maíz* to the Frontline of the Indigenous Struggle for Self-Determination

As a vast literature documents, the cultivation of the *maiz* (corn) has a core practice to understand the indigenous cosmovision among the communities in Oaxaca. According to this scholarship, the cultivation of *maiz* is strongly connected with certain way of life, idea of economy, society, and nature. Bonfil describes this agricultural system as expression of a holistic relation of the indigenous communities with the Earth.⁴⁶⁴ As the author points out, indigenous agriculture “is intimately related to activities other than cultivation of the earth. They form a complex that should be understood as a whole.”⁴⁶⁵ As Luna points out, this activity is a fundamental part of indigenous ways of life in Oaxaca.⁴⁶⁶ The cultivation of corn is oriented to a celebrative consumption that underpins a certain idea of economy that is not based on the market but on communal sharing through the *fiesta*.⁴⁶⁷

⁴⁶⁴ Guillermo Bonfil Batalla, *México Profundo : Reclaiming a Civilization, Transaltion from Latin America Series* (University of Texas Press, 1996).

⁴⁶⁵ Bonfil Batalla, *México Profundo : Reclaiming a Civilization.*, p. 26.

⁴⁶⁶ Jaime Luna Martínez, *Eso Que Lllaman Comunalidad* (Oaxaca: Colección Diálogos, 2010).

⁴⁶⁷ Luna Martínez, *Eso Que Lllaman Comunalidad.*, pp. 34-35.

Anthropologists and historians document the centrality of the corn and *milpa* agricultural system in understanding the indigenous system of knowledge and relationship with nature.⁴⁶⁸ The *milpa* cultivation system represents a specific cosmovision that indigenous peoples have developed around *maiz*, which is a fundamental part of indigenous identities, legends, stories, and rituals.⁴⁶⁹ According to Norma Georgina Guterrez and Jose Antonio Gomez Espinoza, the production and consumption of *maiz* is a fundamental feature of the agricultural community's way of life.⁴⁷⁰ The authors argue that corn is a central element in the construction of communal signified and cultural symbols; it is a fundamental component of the collective construction of knowledge.⁴⁷¹

Tirso Gonzales describes the Mexican indigenous traditional agricultural system of the *milpa*, as a “cultural complex forms through ritual with the spiritual community of the deities and gods, the community of human beings, and the community of nature.”⁴⁷² He speaks about a ‘culture of seeds’. As the author explains, the ‘culture of seeds’ refers to specific “cosmological view and cognitive model, diverse technological strategies and ecosystems, agricultural systems, and substantially different type of social, religious and productive organizations and rituals.”⁴⁷³

However, the process of modernization has adversely impacted the traditional agriculture, jeopardizing indigenous ways of life. Mexican policy has never recognized traditional agriculture as a distinctive expression of the indigenous way of life; on the contrary the state has labeled it as backward and as condition of poverty, therefore in need of modernization. The process of modernization has included several policies that favor the introduction of new technologies and a market-oriented model of production. In

⁴⁶⁸ César Carrillo Trueba, “El Origen Del Maíz Naturaleza Y Cultura En Mesoamérica,” *Ciencias*, 2009.

⁴⁶⁹ Alba González Jácome, “El Maíz Como Producto Cultural Desde Tiempos Antiguos,” in *Desgranando Una Mazorca. Orígenes Y Etnografía de Los Maíces Nativos*, ed. Carmen Morales Valderrama and Catalina Rodríguez Lazcano, 2009.

⁴⁷⁰ Norma Georgina Guterrez and Jose Antonio Gomez Espinoza, “Relatos de Vida Productiva Alrededor Del Maíz. Maíz, Milpa, Conocimiento Y Saberes Locales En Comunidades Agrícolas,” in *Saberes Colectivos Y Diálogo de Saberes En México* (Ibero Puebla, México : UNAM, INAH, 2011), 329–44.

⁴⁷¹ Tirso Gonzales, “Sense of Place and Indigenous People’s Biodiversity Conservation in the Americas,” in *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of Biodiversity*, ed. Jenna Andrews-Swann Nazarea, Virginia D., Robert E. Rhoades (The University of Arizona Press, 2013), 85–106.

⁴⁷² Gonzales, “Sense of Place and Indigenous People’s Biodiversity Conservation in the Americas.”, pp. 95-96.

⁴⁷³ *Ibid.*, pp. 95-96.

recent years, *maíz* has become a symbolic space for confronting hegemonic policies of colonization and for the re-appropriation of indigenous epistemology and territory. In Oaxaca, several coalitions of NGOs and indigenous communities are promoting the importance of the recovery of the corn as expression of a distinctive cosmovision, food sovereignty, as well as an alternative to the current social *status quo*.⁴⁷⁴ Indigenous communities in Oaxaca have started addressing this topic in several public events such as fora and conference.⁴⁷⁵

From these events, it emerges that the cultivation of *maíz* is expression of a distinctive idea of development in which the holistic relation with nature and the *comunalidad* are central elements.⁴⁷⁶ An indigenous activist explains that corn must be protected because the *maíz* is like a person that needs to be respected; it is food for the soul that allows indigenous communities to survive and connect with Mother Earth.⁴⁷⁷ As Toledo, Boege, and Barrera- Bassols argue, indigenous peoples in Mexico have developed a political discourse in which the corn is the signifier for (a) rejection of agricultural technologies such as transgenic biotechnology; (b) opposition to the local effects of the global market; (c) disapproval of the health effects caused by both; and (d) a defense of local food sovereignty in the face of the loss of Mesoamerican agrobiodiversity that is occurring in their territories.⁴⁷⁸

As I will illustrate in Chapter 7, indigenous communities have placed the corn at the frontline of their legal struggle and strategy to fight against Mexican State's assimilationist and modernization policies.

⁴⁷⁴ As an example see: *Espacio Estatal en Defensa del Maíz Nativo de Oaxaca*.

⁴⁷⁵ Many this events are organized by *Espacio Estatal en Defensa del Maíz Nativo de Oaxaca* and *La Campaña En Defensa De La Madre Tierra*.

⁴⁷⁶ Plutarco Aquino Zacarías, "Nuestra Comunalidad : Reflexiones Desde Yalalag," *Alejandra Aquino Moreschi, "La Comunalidad Como Epistemología Del Sur. Aportes Y Retos," Cuadernos Del Sur, Revista de Ciencias Sociales* 8, no. 34 (2013).

⁴⁷⁷ Aldo Gonzalez Rojas, "Antecedentes Y La Situación Del Maíz En México En Año 2008," in *In Diez Anos Del Foro "La Globalizacion Y Los Seres Naturales de La Sierra Juarez, Oaxaca* (Oaxaca: UNSJO, n.d.).

⁴⁷⁸ Víctor M. Toledo, Eckart Boege, and Narciso Barrera- Bassols, "The Biocultural Heritage of Mexico: An Overview," *Landscape* 2, no. 6 (2010), p. 13.

Chapter 5 A Cognitive Injustice Reading of the Mexican Accommodation of Cultural Diversity and Indigenous Peoples

As described in Chapter 4, the Mexican constitution and the Oaxacan legislation recognize indigenous collective rights; however, Mexico records widespread violations of these rights.⁴⁷⁹ The literature illustrates several concurrent causes of this high level of infringement, including weak rule of law,⁴⁸⁰ unequal distribution of resources,⁴⁸¹ and structural racism and violence.⁴⁸² Here, I explore cognitive injustice as a root cause of these violations. As I described above (Chapter 1), cognitive injustice approach focuses on that forms of oppressions that found their origin in the exclusion of indigenous epistemologies from public policies, state institutions and legal systems. In Chapter 6, I will focus on conservation discourse as a new terrain of legal and symbolic conflicts, as well as emancipatory tools.

To understand the injustice that underlines the relationship between indigenous peoples and the Mexican state, we need to question the privilege of modernity in the production of knowledge. As decolonial authors have pointed out, modernity marginalizes indigenous peoples because it is a dominant paradigm that frames the

⁴⁷⁹ For an overview of the Mexican state's indigeneous human rights negative record see: Rodolfo Stavenhagen, "Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico," 2004; Committee on the Elimination of Racial Discrimination, *Concluding Observations*, CERD/C/MEX/CO/15-16-17, April 4, 2012; Human Rights Committee, *Concluding Observations*, CCPR/C/MEX/CO/5, 7 April 2010; Committee on Economic, Social and Cultural Rights, *Concluding Observations*, E/C.12/MEX/CO/4, 9 June 2006; Committee on the Rights of the Child, *Concluding Observations*, CRC/C/MEX/CO/4-5, 3 July 2015; Human Rights Council, *Group on the issue of human rights and transnational corporations and other business enterprises on its mission to Mexico*, A/HRC/35/32/Add.2, 7 April 2017; Inter American system: Inter-American Commission on Human Rights, Country report, *The Human Rights Situation in Mexico*, OEA/Ser.L/V/II.Doc. 44/15, 31 December 2015 Original: Spanish, paras 252-260; pending cases, among others: Inter-American Commission on Human Rights (IACHR), hearing *Derecho al uso y aprovechamiento de los recursos naturales y consulta previa respecto al pueblo indígena Cucapá en México*, 22 October 2008; IACHR, hearing *Destrucción del Patrimonio Biocultural (PatBio) de México debido a la puesta en marcha de diversos megaproyectos*, 30 October, 2014; IACHR, hearing *Pueblos indígenas Yucatán*, 5 December 2016; domestic Tribunal Permanente de los Pueblos, Capítulo México, Audiencia temática "Devastación ambiental y derechos de los pueblos", 5 al 17 de noviembre de 2013.

⁴⁸⁰ María Teresa Sierra Hernández, Rosalva Aída, Rachel Sieder, ed., *Justicias Indígenas Y Estado: Violencias Contemporáneas* (FLACSO Mexico/CIESAS, 2013).

⁴⁸¹ Magdalena Gómez, *Derecho Indígena* (INI, 1997).

⁴⁸² Lucero Radonic, "Environmental Violence, Water Rights, and (Un) Due Process in Northwestern Mexico," *Latin American Perspectives*, 2015.

relationships between humans and non-humans, the construction of subjectivities, and the ideas of economic development and the market.⁴⁸³

In the case of Mexico, the privilege of modernity has shaped the state policy's towards indigenous peoples; as a consequence, the current relationship between the Mexican state and indigenous communities in term of accommodation of cultural diversity and effective enjoyment of collective rights, needs to be analyzed in this context. Focusing the analysis on cognitive injustice, the recognition of indigenous ways of life and epistemologies in public policy, scientific discourses, and legal system becomes the core concern that the multicultural debate needs to address to build a more inclusive idea of citizenship. Decolonial scholarship denounces mainstream society's construction of indigenous epistemologies as backward and anti-progressive, thus excluding them from scientific, legal, and political debates.⁴⁸⁴

As Mario Blaser points out, multiculturalism should engage with what is politically possible. As Blaser explains, most of the multicultural literature has limited the political debate to control over resources; however, a situated analysis of the indigenous practices show that what is at stake is more than resources.⁴⁸⁵ Different meanings over territory, different ways of perceiving reality and interacting with nature, and different models of society become central concerns. Multiculturalism, as a political project that redefines the relationship between state and indigenous peoples, needs to engage with the existence of other epistemologies in order to imagine what is legally and politically possible and to reveal the privilege of the canon of modernity in shaping the political and legal spheres.

As I illustrated in the previous chapter, indigenous specificity in Oaxaca is expressed in a unique conceptualization of the social relationship (*comunalidad*), and the relationship between nature and human beings (idea of territory). However, this specific epistemology has never been effectively integrated into the legal system that protects

⁴⁸³ See: Chapter 1.

⁴⁸⁴ Among others see: Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World, The Making and Unmaking of the Third World*, 1995; Gustavo Esteva, "Hosting the Otherness of the Other: The Case of the Green Revolution," in *Decolonizing Knowledge: From Development to Dialogue*, ed. Stephen Apffel-Marglin, Frederique Marglin A., 1996, 249–78; Robert A. Williams, *Savage Anxieties: The Invention of Western Civilization* (Macmillan, 2012); Michael R Dove et al., "Globalisation and the Construction of Western and Non-Western Knowledge," in *Local Science Vs Global Science*, 2009.

⁴⁸⁵ Mario Blaser, "Ontological Conflicts and the Stories of Peoples in Spite of Europe," *Current Anthropology* 54, no. 5 (2013).

collective rights, or as I will show later, in the Mexican policy implemented in indigenous territories. In recent years, however, the need to cope with the ecological crisis has moved the relationship between nature and human beings, as well as the sustainable use of natural resources, to the fore of political debate.

To understand the current struggle of indigenous peoples in Mexico and to contextualize the legal strategies that indigenous communities are putting in place to protect their rights to self-determination, this chapter offers an overview of how modernity, as a dominant paradigm, has shaped the relationship between the Mexican state and indigenous peoples. In particular, this part discusses what currently is politically possible in the field of accommodation of cultural diversity. This chapter sets the stage to analyze the Mexican conservation policy. This policy, based on biodiversity discourse, promotes the commodification of natural components, and creates a new hierarchy in the use of the territory. Chapter 6 will show the evolution of this policy and the emergence of new legal sites of struggles, and it will offer some conclusions on how Mexican conservation policy impacts collective rights.

5.1 Mexican State and Indigenous Peoples: Setting the Stage

In the Mexican history, a central struggle for indigenous self-determination has been maintaining the control over their ancestral territory. In the case of Oaxaca, indigenous lands are very rich in natural and mineral resources; consequently, since the colonization, the state has enacted laws and policies that have imposed certain uses and meanings over resources and lands.⁴⁸⁶ As Hugo Aguilar, Mixe lawyer and intellectual, explains, the ways of life of indigenous peoples can be guaranteed only if they have unconditional access to, and control over, their territory.⁴⁸⁷ However, the indigenous struggle is more than control over resources. As the practice of the indigenous

⁴⁸⁶ Indigenous territory has been object of exploitation of natural resources since the colonization era. This appropriation has also concerned plans and ecological knowledge. The most relevant document on this appropriation of indigenous knowledge is in the Florentine Code. In this document there is not recognition of indigenous contribution in the cultivation of plants.

⁴⁸⁷ Hugo Aguilar, "Las Leyes Energéticas Y Su Impacto en La Autonomía de Los Territorios Indígenas Y Campesinos," in *La Nueva Servidumbre Agraria y La Resistencia Indígena Y Campesina*, ed. Ana Hernández Navarro, Luis , de Ita Rubio (Mexico: Centro de Estudios para el Cambio en el Campo Mexicano, 2016), 11–20.

communities shows, this struggle concerns the recognition and inclusion in the political and public debate of different ways of living in the territory, interactions with nature, and different ideas of society.⁴⁸⁸

As Jaol Aquino, a Zapotec leader, wonders during a forum on indigenous rights: “que tiene que ver el asunto del maíz con la defensa del derecho indígena? No puede entenderse la cuestión esencial del derecho indígenas sin avalorar la dimensión que tiene el maíz en la vida de las comunidades indígenas.”⁴⁸⁹ As I illustrated in Section 4.8, corn expresses a certain way of life in the territory and social relations, as well as a certain relationship with nature. As a vast literature has shown, this epistemology has been neglected, excluded under the privilege of modernity as a dormant paradigm.⁴⁹⁰ Therefore, the indigenous struggle is more than control over resources but concerns the underling rationales and discourses that have shaped public policy towards them since colonization. To shed light on this point, I will illustrate the evolution of Mexican policy towards indigenous peoples, showing the impact that the exclusion of these epistemologies has had on indigenous rights.

The next section briefly describes the evolution of the Mexican policy towards indigenous peoples. After colonization, the literature has divided this policy into two main phases: the assimilationist and the multicultural.⁴⁹¹ In the first phase, the exclusion of indigenous peoples was perpetuated by embracing a mono-cultural construction of

⁴⁸⁸ See Chapter 4.

⁴⁸⁹ “What does corn have to do with the defense of indigenous rights? The essential issue of indigenous law cannot be understood without validating the importance of corn in the lives of indigenous communities.” (My translation). Joel Aquino, “Líder Indígena Zapoteco, Yalálag, Oaxaca,” in *Derecho Indígena*, ed. Magdalena Gomez (INI, 1997), p. 435. The same position is expressed in several indigenous declarations, workshops, fora.

⁴⁹⁰ In this regard, a vast literature, among others see: Bonfil Batalla, *México Profundo : Reclaiming a Civilization*; Boaventura De Sousa Santos, “Introduction. Creating a Distance in Relation to Western-Centric Political Imagination and Critical Theory,” in *Epistemologies of the South. Justice against Epistemicide*, 2014; Vandana Shiva, *Who Really Feeds the World?* (Zed Books Ltd, 2016); De La Cadena, “Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond ‘Politics’”; Viveiros and Castro, “Cosmological Deixis and Amerindian Perspectivism”; Dussel, *The Invention of the Americas. Eclipse of “the Other” and the Myth of Modernity*; Esteve, “Hosting the Otherness of the Other: The Case of the Green Revolution.”

⁴⁹¹ On this topic a vast literature, among others see: Rodolfo Stavenhagen, “Indigenous Peoples and the State in Latin America: An Ongoing Debate,” in *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy*, ed. Rachel Sieder (Palgrave Macmillan, 2002); Rachel Sieder, ed., *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy* (Palgrave Macmillan, 2002); De La Peña, “A New Mexican Nationalism? Indigenous Rights, Constitutional Reform and the Conflicting Meanings of Multiculturalism”; Bartolomé Clavero, *Geografía Jurídica de América Latina: Pueblos Indígenas Entre Constituciones Mestizas* (Siglo XXI, 2008); Donna Lee Van Cott, “Indigenous Peoples’ Politics in Latin America,” *Annual Review of Political Science*, 2010.

Mexican national identity. Consequently, the indigenous way of life was labeled as backward and Mexican policy aimed to modernize indigenous communities. In the second phase, the constitutional multicultural reform recognized indigenous collective rights but did not lead to the recognition of indigenous epistemologies/ontologies in the public sphere.⁴⁹²

5.2 The Assimilationist Phase: Incorporating the Indians into the Nation

In the nineteenth and twentieth centuries, the Mexican nation-building process was based on a homogenous, mono-ethnic idea of state. As Guillermo de la Peña explains, the ethnic national identity was constructed on the ‘myth of *mestizaje*’. In this context, the mestizo⁴⁹³ was the only Mexican identity. Embracing an evolutionist approach to culture, indigenous ways of life were considered a transitory stage in the evolution towards a superior *meztliso* civilization. Consequently, indigenous culture was supposed to disappear, as indigenous groups became culturally and ethnically absorbed in the *mestizo* society.⁴⁹⁴ Rodolfo Stavenhagen argues that the achievement of this new homogenous identity was pursued throughout a process of modernization aimed at “incorporating the Indians into the nation”.⁴⁹⁵ As the sociologist explains, based on the modern dichotomy of progress/regression, backward/forward, present/past, the state pictured the indigenous epistemologies and ways of life as backward, a break in development. In this framework, indigenous communities needed to be modernized and integrated into the mainstream society.⁴⁹⁶

⁴⁹² For public sphere, I mean the public policy, the scientific discourse and legal system.

⁴⁹³ The mestizo was a hybrid identity constructed from the colonizers (Spaniers) and the indigenous cultures. Spanier and indigenous cultures were considered unfitted for guaranteeing the progress of the Mexican nation. In fact, embracing an evolutionistic approach to culture, they were considered a transitory stage towards the affirmation of the only one Mexican identity: the mestizo. For an overview of the ideological foundation of the Myth of *mestizaje* and the implementation of the cultural homogenization project in Mexico see: Jorge Hernández Díaz, *Reclamos de La Identidad: La Formación de Las Organizaciones Indígenas En Oaxaca* (Miguel Angel Porrua, 2001).

⁴⁹⁴ De La Peña, “A New Mexican Nationalism? Indigenous Rights, Constitutional Reform and the Conflicting Meanings of Multiculturalism.”

⁴⁹⁵ Stavenhagen, “Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico.”, para. 11.

⁴⁹⁶ *Ibid.*, para. 11.

This process of assimilation passed through a series of public reforms; in particular, a policy of modernization and technocization of the agricultural sector.⁴⁹⁷ The centrality of agriculture in the assimilationist project can be appreciated by looking at the Mexican history of the indigenous achievement of rights.

As described above (Section 4.2) historically, agricultural policy played a paramount role in the process of indigenous entitlement of collective rights, and today it is still a key to understanding the indigenous situation in Mexico. Agriculture, a fundamental economic activity for many indigenous communities,⁴⁹⁸ has a paramount cultural meaning, expressed in the sacred and symbolic values of, e.g. corn, a particular reciprocal relationship with the earth, correlated with a system of knowledge, rituals, stories, and traditions.⁴⁹⁹

After the Mexican revolution, the 1917 constitutional reform of Article 27 redistributed the lands to indigenous communities and recognized for the first time the indigenous collective property over their territory. Even if Article 27 recognizes collective rights over indigenous ancestral lands, the Mexican state has never integrated the indigenous ways of living in their territory into the agricultural policy. Consequently, since the green revolution in the 1940s, Mexico has promoted the modernization of the agricultural sector,⁵⁰⁰ introducing a new technological paradigm- mechanization, use of fertilizers, improved seeds- aimed at maximizing productivity.⁵⁰¹

In the 1990s, after the adoption of the North American Free Trade Agreement (NAFTA), Mexico promoted new agricultural modernization programs in order to meet the international market demand. In 1994 the PROCAMPO program was launched. This program offered incentives to support the access of local farmers to the market.

⁴⁹⁷ Rodolfo Stavenhagen, "Indigenous Peoples and the State in Latin America: An Ongoing Debate."; Stavenhagen, "Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico."; Diego Iturralde, "Iturralde, Diego. "Desarrollo Indígena; Los Retos de Final de Siglo," ed. Magdalena Gomez (INI, 1997).

⁴⁹⁸ Barabás and Bartolomé, *Etnicidad Y Pluralismo Cultural: La Dinámica Étnica En Oaxaca*.

⁴⁹⁹ Bonfil Batalla, *México Profundo : Reclaiming a Civilization*. For an overview of the topic see Sections 4.7 and 4.8.

⁵⁰⁰ Hewitt de Alcántara C. B, *La Modernización de La Agricultura Mexicana, 1940-1970*, ed. Sligo Ventuno Editores, 1978. Raúl Salinas de Gortari, *Agrarismo Y Agricultura En El México Independiente Y Posrevolucionario, Vida Y Pensamiento de México*, 1988.

⁵⁰¹ José Luis Del Valle, María del Carmen, Solleiro, *El Cambio Tecnológico En La Agricultura Y Las Agroindustrias En México* (México : Siglo XXI UNAM-IIES, 1996).

Furthermore, the ratification of NAFTA led to neoliberal structural reforms, such as the one to guarantee the certainty of the property tenure system.

In 1992 the state amended Article 27 of the constitution, allowing for the privatization of commons lands.⁵⁰² As a corollary, the federal government promoted programs, such as *Programa de Certificación de Derechos Ejidales y Titulación de Solares*, (Program for Certification of Rights to Ejido Lands, PROCEDE), *Programa de Regularización y Registro de Actos Jurídicos Agrarios* (Program for the Regularization and Registration of Legal Agricultural Acts, FANAR-RRAJA). These programs were designed following the recommendations of the World Bank (WB) to increase the productivity of *ejidos* by giving them the right to dispose of their lands.⁵⁰³ Eventually, the reform has eroded the communal land tenure system. On this matter, some commentators argue that the land reform brought a *de facto* expropriation of communal lands in favor of the market.⁵⁰⁴ Furthermore, these agricultural reforms and programs strongly impacted indigenous epistemologies, favoring the abandonment of traditional forms of knowledge such as the *roza tumba y quema* (sometimes referred to as “slash and burn”), the reciprocity system, and the agricultural pluricultivation system.

A similar reading can be offered in the forest sector. Because 70 per cent of Oaxacan forests belong to indigenous peoples,⁵⁰⁵ the policy implemented in this sector sheds light on the relationship between Mexico and indigenous peoples.⁵⁰⁶ As I will describe in the case of Santiago Lachiguiri, the forest is not only a commercial resource to be exploited, but it has cultural and symbolic meanings for the community. In particular, it is part of a complex relationship that involves certain agricultural practices, productions, social practices, and knowledge.

However, under a modernization paradigm, in the period between around 1940 and the end of the 1980s, the Mexican state granted long-term logging concessions in the

⁵⁰² Gómez Rivera, “Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance,” 2013.; Stavenhagen, “Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico.”

⁵⁰³ John Richard Heath, “Enhancing the Contribution of the Land Reform to Mexican Agricultural Development,” Policy Research and External Affairs, 1990.

⁵⁰⁴ Tequio Jurídico A.C, “El PROCEDE En Comunidades Indígenas No PROCEDE, PROCEDE-FANAR-RRAJA- El Mismo Disfrazo” (Oaxaca : Tequio Jurídico A.C, Rosa Luxemburg Stiftung, 2016).

⁵⁰⁵ Centro de Estudios para el Cambio en el Campo Mexicano, “México: Efectos de Las Políticas de Conservación Frente a La Crisis Climática Para Las Comunidades Indígenas Y Campesinas,” 2014.

⁵⁰⁶ Under Mexican law the forest are in the ownership of the land’s owner; therefore many indigenous communities that have collective rights on their territory, has the legal control over their forest.

indigenous forests. These concessions were issued to favor of private and national companies.⁵⁰⁷ As Leticia Merino explains, this occurred because the government's lacked of confidence in the capacity of the communities to carry on efficient logging activities.⁵⁰⁸ As the author points out, the community land tenure system was pictured as unproductive and inefficient.⁵⁰⁹ Mexican economic policy embraced Garrett Hardin's theory known as "the tragedy of the commons"⁵¹⁰ which defined the economic agent as an individual driven by self-interest and indifferent to the exhaustion of common resources.⁵¹¹

This theory ignored the experience of the indigenous community tenure system, which was based on a different idea of society, the *comunalidad* (Section 4.7).⁵¹² The result of a forestry policy based on this modernization discourse, was a massive exploitation of forests resources, which adversely impacted on indigenous cosmovision by depauperating their territory. This was the case of many communities in the *Serra Norte* of Oaxaca in which, the past exploitation of the communal forest by a semi-private enterprise, plays a fundamental role in understanding the contemporary struggle of these communities to maintain their distinctiveness before the state and also in the loss of traditional agricultural practices.

To sum up, during the assimilationist phase, modernization was considered a path to integrate indigenous peoples into the nation. Embracing an evolutionist approach, indigenous epistemology was relegated to something belonging to the past, a transitory stage towards civilization. In the XXI century, this approach was formally overcome. The multicultural reforms in Latin American recognize the existence of the indigenous peoples and their culture was no longer an obstacle for the enjoyment of full citizenship. However, the practice and the policy embraced by the Mexican state, tell another story.

⁵⁰⁷ For an overview on the Mexican forestry policy see: L Merino-Pérez and Gerardo Segura-Warnholtz, "Las Políticas Forestales Y de Conservación Y Sus Impactos En Las Comunidades Forestales En México," in " *Los Bosques Comunitarios de México. Manejo Sustentable de Paisajes Forestales*, ed. David B. Bray and L Merino-Pérez (Instituto Nacional de Ecología, 2007), 21–49.

⁵⁰⁸ Ibid, p.29.

⁵⁰⁹ Ibid, p.29.

⁵¹⁰ Hardin, "The Tragedy of the Commons."

⁵¹¹ Leticia Merino-Pérez, Leticia Merino Pérez, and L Merino Pérez, *Conservación O Deterioro. El Impacto de Las Políticas Públicas En Las Instituciones Comunitarias Y En Los Usos de Los Bosques En México, Mexico: Instituto Nacional de Ecología*, 2004.

⁵¹² Some years later, Elinor Ostrom brought into the economic theory the indigenous communal system of property. See: Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*.

5.3 The Multicultural Phase: Modernization of the Poor and the Good Indian

At the beginning of the XXI century, Mexico deliberately redefined its national identity as pluricultural instead of mono-ethnic. As described in Chapter 4, Mexico is a multicultural state that recognizes indigenous autonomy and collective rights. However, the recognition of these collective rights has not been accompanied by the recognition of indigenous epistemologies in the public sphere. As Guillermo Bonfil Batalla argues, the decolonization process in Mexico is incomplete. As the author explains, the ‘imaginary Mexico’, namely the Eurocentric Western modern project, has never been dismantled within the structure of the Mexican state. As a consequence, *Mexico profundo* (deep Mexico), namely the oppressed indigenous epistemology systems, has never emerged as a political alternative.⁵¹³

The constitutional multicultural advancement has not changed the privilege of modernity in the public policy towards indigenous peoples. Under the rationale of neoliberal reforms and economic progress, the process of modernization of the indianas is ongoing. However, the discourse has changed from the backward indians to the backward poor farmer. In the first case, culture was the obstacle for economic and social progress and integration; indigenous epistemology needed to be overcome to guarantee full access to the citizenship. One of the most brutal expressions of this policy in Mexico, was the ban of indigenous languages. This policy has led to the disappearance of an immense and diverse system of knowledge. With the multicultural reform, poverty and marginality become the targets of modernization; however, indigenous epistemological systems are still the real object of this process. To understand this point, I need to briefly describe the context in which the Mexican multicultural reform took place.

As I described in the first part of this paper, authors agree that neoliberal reforms strongly supported the multicultural constitutional turn in the Latin America.⁵¹⁴ As they also argue, constitutional collective rights, in particular rights to self-determination and rights to lands and resources, are implemented as soon as they do not threaten the

⁵¹³ Bonfil Batalla, *México Profundo : Reclaiming a Civilization*.

⁵¹⁴ Among others see: Gemma van der Haar Hoekema, A. J., Willem Assies, ed., *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America* (Amsterdam : Thela Thesis, 2000); Charles R. Hale, “Neoliberal Multiculturalism,” *PoLAR: Political and Legal Anthropology Review*, 2005, doi:10.1525/pol.2005.28.1.10; Will Kymlicka, “Neoliberal Multiculturalism?,” *Social Resilience in the Neoliberal Era*, 2013.

neoliberal project and the canons of modernity such as: economic growth, the privilege of positive science, the divide between nature and culture, and the commodification of nature. Consequently, the effective enjoyment of collective rights is subordinated to mechanisms of inclusion and exclusion which define what is culturally admissible in the public sphere. As Silvia Rivera Cusicanqui argues: “governments are using cultural rights to divide and domesticate indigenous movements”.⁵¹⁵ To illustrate this point, I rely on the social political category of the *indio permitido* (authorized Indian) created by Charles Hale and Rosamel Millanmn.⁵¹⁶ As Hale explains, the new divide is between “the ethnicity, which builds social capital, and ‘dysfunctional’ ethnicity which incites conflict.”⁵¹⁷ As the author continues only the former “has passed the test of modernity” while the latter is condemned to “the racialized spaces of poverty and social exclusion.”⁵¹⁸

The ethnographic works of some authors confirm that poverty works as a new dispositive of exclusion for indigenous peoples and limits the implementation of constitutional collective rights. As Rosalva Aída Hernández, Rachel Sieder and Maria Teresa Sierra argue, in the last years of the Mexican multicultural project, the federal and local governments have labeled indigenous peoples as poor farmers or criminals.⁵¹⁹ These constructions have allowed for oppression of indigenous protests against megaprojects,⁵²⁰ and more generally any project that does not acknowledge the indigenous right to define their territory and resources.⁵²¹

That construction of indigenous peoples allows the government to crack down on indigenous protests regardless of constitutional collective rights that *de jure*, protect indigenous requests. These kinds of protests are expressions of a conflict extends beyond control of resources. It is a battle for the survival of a certain way of life in the territory, a certain system of knowledge, a certain alternative political project. As Elisa Cruz Rueda describes in the case of the protests of the indigenous communities against the wind park

⁵¹⁵ Hale, “Rethinking Indigenous Politics in the Era of the ‘Indio Permitido.’”

⁵¹⁶ Hale, Charles, “Cultural Agency and Political Struggle in the Era of the Indio Permitido.”

⁵¹⁷ Hale, “Rethinking Indigenous Politics in the Era of the ‘Indio Permitido.’”, p. 17.

⁵¹⁸ Ibid, p. 19.

⁵¹⁹ Hernández, Rosalva Aída, Rachel Sieder, *Justicias Indígenas Y Estado: Violencias Contemporáneas*.

⁵²⁰ Ibid.

⁵²¹ There exists several examples, such as the criminalization of traditional fishing in the case of Cucapá peoples in the protected area of High Gulf of California and Delta of the Colorado river.

in the Tehuantepec Isthmus in Oaxaca, what is at stake is an idea of territory based on the indigenous identity.⁵²²

Furthermore, as Díaz Hernández explains, indigenous communities are pictured as poor and disorganized farmers, therefore in need of technological capacitation and modernization.⁵²³ Poverty and marginalization are the main drivers for justifying the ‘modernization of the Indians’ in the era of neoliberal multiculturalism. Consequently, epistemologies that challenge or do not fit the neoliberal project and the canon of modernity, are labeled as expressions of poverty, ignorance, and marginalization and therefore, in need of a process of modernization.

For example, the traditional agricultural system of pluricultivation is an expression of a certain cosmovision that challenges the divide between nature and human beings, and the economic paradigm of productivity growth. Under the canon of modernity, this model of agriculture has been labeled as subsistence, not productive, and as an expression of poverty; therefore in need of change in the name of the economic progress. Consequently, it has not been recognized as expression of the indigenous way of life, excluding it from the multicultural debate. Ultimately, labeling indigenous epistemology and ontology as expressions of poverty and marginalization is a way to exclude these alternative epistemologies from the political project to rethink the relationship between the indigenous peoples and the state.

Under the flag of economic progress and technologicalization, governmental policy and programs aim at transforming the poor and backward farmers into modern producers. The most recent agricultural program called Productive PROAGRO is still embracing a modernization rationale; in fact, it links economic incentives to productivity results and to specific investments. Consequently, access to agricultural funds is subordinated to specific investments and the farmers have to prove that they used the incentives for technical, productive, organizational or investment improvements, that is,

⁵²² Elisa Cruz Rueda, “Derecho a La Tierra Y El Territorio: Demandas Indígenas, Estado Y Capital En El Istmo de Tehuantepec,” in *Justicias Indígenas Y Estado: Violencias Contemporáneas*, ed. María Teresa Sierra, Rosalva Aída Hernández, and Rachel Sieder (FLACSO-México, 2013), 341–82.

⁵²³ Hernández Díaz, *Reclamos de La Identidad: La Formación de Las Organizaciones Indígenas En Oaxaca*.

technical assistance, machinery, certified seeds, fertilizers, restructuring, insurance or price hedging.⁵²⁴

Furthermore, in recent years, the agricultural sector has reached new peaks of technologicalization, leading to new ‘epistemological and symbolic conflict’. The adoption of laws on commercialization of seeds⁵²⁵ and the suspension of the *moratorium* on transgenic plants on March 9th, 2009 has allowed transitional corporations to create experimental fields of genetically modified corn and soya.⁵²⁶ The adoption of these laws has led to protests all around Mexico, with indigenous organizations and communities at the frontline.⁵²⁷ Through fora and networks, they have denounced the adverse impact that Genitally Modified Organisms (GMO) can have on the existence of their traditional agricultural system; the corn varieties that they have created and curated for centuries;⁵²⁸ and indigenous food and cultural sovereignty.⁵²⁹

These laws do not acknowledge the centrality that corn has for the indigenous communities in Mexico. As some grassroots indigenous organizations point out, these laws treated the native seeds as valueless, classifying them at the lowest level of the seeds’ technological innovation and allowing for the free access to them. Moreover, the laws do not contemplate the cultural values of the native corns for the indigenous communities.⁵³⁰ Corn is a symbol for an alternative way of conceiving the relationship with nature and development, in other words an alternative system of knowledge that is currently excluded from the Mexican legal system.⁵³¹

⁵²⁴ SAGARPA, PROAGRO Productivo, Diario Oficial de la Federación, December 31, 2016.

⁵²⁵ *Ley Sobre Producción, Certificación Y Comercio de Semillas*, (Federal Act on Seed Production, Certification and Commercialization), June 15, 2007; *Ley Federal de Variedades Vegetales* (Federal Act on Vegetal Varieties), April 9, 2012.

⁵²⁶ From 1997 to 2009, Mexico participated in a *moratorium* on transgenic plants.

⁵²⁷ Brot Centro de Estudios para el Cambio en el Campo Mexicano, “Crisis Climática Y Defensa de Los Territorios Indígenas Y Campesinos -28 Y 29 de Octubre de 2015,” Memoria Del Encuentro, 2015.

⁵²⁸ Grupo ETC y GRAIN Colectivo por la Autonomía, *¡No Toquen Nuestro Maíz! (El Sistema Agroalimentario Industrial Devasta Y Los Pueblos En México Resisten)* (GRAIN, Editorial Itaca, 2014), p. 14.

⁵²⁹ Caravana de la Diversidad Biocultural, “Pronunciamento Del Diálogo Indígena Y Campesino de La Caravana de La Diversidad Biocultural, December 1st” (Ciudad de México, 2016), http://sinmaiznohaypais.org/wp-content/uploads/2017/01/Pronunciamento-Dialogo-Indigena-y-Campesino_abstract.pdf; Asociación Nacional de Afectados Ambientales, “Devastación Del Patrimonio Biocultural de México” (Mexico, D.F, 2013).

⁵³⁰ Espacio Estatal en Defensa del Maíz Nativo, “La Ley de Semillas Un Atentado Al Maiz Nativo Y a La Prácticacampesina” (Oaxaca, 2014).

⁵³¹ On this topic see: Peter Brown, “Maya Mother Seeds in Resistance of Highland Chiapas in Defense of Native Corn,” in *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of*

This statement is even truer in the wake of the adoption of the recent Mexican developmental reform. After the NAFTA agreement was signed, following the lead of international financial institutions, Mexico has promoted a model of development based on large scale projects such as extractives projects, highways and landfills.⁵³² As reported by an extensive literature, this policy has had adverse consequences on indigenous territory, from indigenous disposition of their lands to eco-ethnocide.⁵³³

Regardless of the multicultural turn, the government has not changed this policy, on the contrary, in 2013 it renewed its commitment for this model of development. In this regard, in December 2013, the Mexican parliament approved the *Reforma Energética* (Constitutional Energetic Reform).⁵³⁴ Nine laws adopted in August 2014, which introduced new legal principles concerning the use of Mexican subsoil resources and energy development, implemented the Reform.⁵³⁵ The Reform qualifies economic activities such as mining- as valuable; therefore they prevail over any other competitive soil and sub-soil use. The challenge of this reform for indigenous communities can be understood looking at the number of mining concessions in the indigenous territories. At the beginning of the 2017, the federal government had granted about 323 mining concessions in the state of Oaxaca; 80 per cent of them in the indigenous territories.⁵³⁶

Given this scenario, the following chapter get at the core of my argument looking at the evolution of the conservation policy and the underlying rational. In the Mexican multicultural state, conservation policy are an interesting terrain in which analyze the intersection of indigenous collective rights, privilege of modernity and recognition of indigenous epistemologies. Since the early 1990s, conservation policy has gained momentum in Mexico and particularly in Oaxaca. In fact, biologists have qualified

Biodiversity (Tucson: The University of Arizona Press, 2013), 151–77; Kathleen McAfee, “Corn Culture and Dangerous DNA: Real and Imagined Consequences of Maize Transgene Flow in Oaxaca,” *Journal of Latin American Geography*, 2003.

⁵³² Under the Mexican legal framework, federal government has ownership and control of the subsoil resources and the water, despite the presence of communal property.

⁵³³ Among others see: Toledo, *Ecocidio En México: La Batalla Final Es Por La Vida*.

⁵³⁴ Decree “por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía”, *Diario Oficial de la Federación*, December 20, 2013.

⁵³⁵ *Ley de Hidrocarburos, la Ley de la Industria Eléctrica, la Ley de Energía Geotérmica, y las reformas a la Ley de Minería, la Ley de Inversión Extranjera, la Ley de Asociaciones Público Privadas y la Ley de Aguas Nacionales*, *Diario Oficial de la Federación*, August 11 2014.

⁵³⁶ Ceccam, “Concesiones Mineras, Parques Eólicos Y Áreas de Conservación En El Estado de Oaxaca,” 2017.

Oaxaca as a biodiversity hot spot.⁵³⁷ In this territory, there is a strong correlation between priority areas for biodiversity conservation and the presence of indigenous communities. According to the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Mexican Commission for the Knowledge and Use of Biodiversity- Conabio) more than 50 per cent of the terrestrial and the hydrological priority regions are situated in indigenous territory.⁵³⁸ The interrelation between conservation areas and indigenous territories becomes a new space in which analyze how discourses on conservation can impact indigenous collective rights and their epistemologies.

The following chapter is not intended to provide a detailed analysis of the Mexican environmental policy, but to offer the readers a general overview of some of the pillars of this policy to allow them to understand the impact that the conservation policy is having on indigenous collective rights and the emergences of new legal sites of struggles and emancipations for indigenous communities. Recalling the concepts discussed in part I, the following chapters will show that the Mexican conservation policy is based on biodiversity discourse and will discuss the implication for indigenous peoples' collective rights in Oaxaca.

⁵³⁷ Miguel Abisaí J. García-Mendoza, Ordonez, María de JesúsDíaz, Briones-Salas, ed., *Biodiversidad de Oaxaca* (UNAM, 2004).

⁵³⁸ Centro de Estudios para el Cambio en el Campo Mexicano, "México: Efectos de Las Políticas de Conservación Frente a La Crisis Climática Para Las Comunidades Indígenas Y Campesinas."

Chapter 6 Indigenous Collective Rights at the Crossroads of Biodiversity Conservation in Mexico

Since the late 1980s, in Latin America, the conservation of biological diversity has gained momentum due to the high presence of GRs, species and ecosystems. Mexico ranks among the top 17 megadiverse countries that have between 60 and 70 per cent of worldwide biodiversity.⁵³⁹ Consequently, Mexico has become recipient of several financial and international programs to cope with the global loss of biodiversity.

As the literature documents, the biodiversity hotspots for conservation overlaps with areas inhabited by indigenous communities.⁵⁴⁰ Given the co-presence of indigenous communities and the ‘reservoirs of natural resources’, the implementation of conservation policy has occurred mostly within indigenous territory. As I described in part I, conservation policy is a battlefield of meanings and a construction of ideas of nature, market, and community. Consequently, it is an interesting field in which to test how the imposition of meanings and uses over resources can adversely impact collective rights while offering new spaces of dialogue and imagination.

Given this framework, the following chapters navigate the interrelation between conservation discourses and the effective enjoyment of collective rights. They addresses: how, in practice, conservation policy impacts collective rights; how indigenous communities use the biocultural diversity discourse to re-appropriate their ways of living in their territory; and how conservation discourses are affecting indigenous customary legal systems and legal strategies.

This chapter analyzes the impact of Mexican conservation policy on indigenous collective rights. Relying on a cognitive injustice approach, I will show how this policy imposes specific meanings and uses on indigenous territory and resources that are at odds with the ways some indigenous communities conceive, use, and represent their territory and their relationship with nature. Therefore, this policy adversely affects the indigenous right to self-determination in the form of cultural sovereignty. Furthermore, embracing a

⁵³⁹ Mexican Government, *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción*, 2016-2030.

⁵⁴⁰ Boege, “El Patrimonio Biocultural de Los Pueblos Indígenas de Mexico: Hacia La Conservación in Situ de La Biodiversidad Y Agrobiodiversidad En Los Territorios Indígenas”; Abisaí J. García-Mendoza, Ordonez, María de JesúsDíaz, Briones-Salas, *Biodiversidad de Oaxaca*.

certain construction of the ‘Indians’, the policy creates new forms of inclusion and exclusion in access to collective rights. I conclude that Mexican conservation policy offers, paraphrasing Bonfil, new spaces for the ‘imaginary Mexico’ - Eurocentric Western modern project- at the detriment of the *Mexico profundo*- oppressed indigenous epistemological alternatives.⁵⁴¹

6.1 A Brief Overview of the Emergence of the Mexican Conservation Policy

In the 1990s, Mexico embraced a comprehensive environmental policy, with a particular focus on conservation. This important turn is due to some contingent events. The first is the adoption of the NAFTA. American conservation and environmental groups succeeded in incorporating environmental provisions into the trade agreement.⁵⁴² Consequently, Mexico had to pass environmental reforms to meet the standards that the act required. In 1994 the government created a specific federal ministry to deal with environmental issues: the *Secretaría de Medio Ambiente y Recursos Naturales* (Ministry of Environment and Natural Resources- Semarnat).⁵⁴³ The SEMARNAT is the most important body for promoting bills and programs in this matter. Furthermore, since its inception, SEMARNAT has created some specialized agencies to cope with specific aspects of conservation such as the *Comisión Nacional de Áreas Naturales Protegidas* (National Commission of Natural Protected Areas - CONANP) and *Comisión Nacional Forestal* (National Forestry Commission -CONAFOR).

Moreover, the ratification of international environmental covenants⁵⁴⁴ and the endorsement of an international agenda on conservation⁵⁴⁵ catalyzed the adoption of

⁵⁴¹ Bonfil Batalla, *México Profundo : Reclaiming a Civilization*.

⁵⁴² National Wildlife Federation, “Environmental Reform of International Trade,” 1994.

⁵⁴³ For the purpose of this work, I only refer to the Ministry of Environment and Natural Resources as Semarnat. However, in 1994 the name of the Ministry was the *Secretaría de Medio Ambiente, Recursos Naturales y Pesca* (Semarnap). In 2000, it became Semarnat.

⁵⁴⁴ United Nation General Assembly, *Convention on Biological Diversity*, A/RES/65/161, 11 March 2011; Secretariat of the Convention on Biological Diversity, *Cartagena Protocol on Biosafety to the Convention on Biological Diversity*, Montreal on 29 January 2000; Secretariat of the Convention on Biological Diversity, *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity* 29, Nagoya, October 2010.

environmental reforms in Mexico. Particularly after the ratification of the Convention on Biological Diversity (CBD), the Mexican government launched an official conservation policy. For this purpose, in 1994, it created the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Mexican Commission for the Knowledge and Use of Biodiversity- CONABIO). CONABIO is an inter-ministerial agency devoted to the conservation of biological diversity. It is a scientific body that develops applied research and produces scientific reports on biodiversity conservation; furthermore, it functions as a consultant body for Federal agencies, developing strategies and guidelines for the implantation of the Mexican conservation policy.

An attentive reading of the official Mexican documents shows that Mexico conservation policy embraces a biodiversity paradigm. As extensively described in Chapter 2, the main pillars of biodiversity discourse in conservation are the following: a) privilege of the Western modern science in defying the object of conservation; b) construction of nature in economic terms; c) ecosystem approach that separates nature and culture; and d) centrality of the management and planning of the environment, in particular, promotion of protected areas and local community management. To reveal the paradigm underling the Mexican conservation policy, I will analyze official documents⁵⁴⁶ and programs issued by environmental agencies,⁵⁴⁷ as well as the environmental legislation.⁵⁴⁸

⁵⁴⁵ United Nations *Conference on Environment and Development* (UNCED), Rio de Janeiro, 3-14 June 1992; *Agenda 21*, the Rio Declaration on Environment and Development, 3-14 June 1992. United Nations, *Millennium Development Goals 2015*; United Nations, *Sustainable Development Goals*.

⁵⁴⁶ Mexican Government, *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción*, 2016-2030; Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (Conabio), *Capital Natural de México*, 2012. The Natural Capital of Mexico is the most comprehensive account on biodiversity in Mexico, and it is the most important influential opera in this field. It is the result of more than 15 years of research conducted by the Conabio. 648 experts from about 200 institutions collaborated in the redaction of this book. The book is divided in several parts: *Acciones Estratégicas Para Su Valoración, Preservación y Recuperación; Síntesis: conocimiento actual, evaluación y perspectivas de sustentabilidad; I. Conocimiento actual de la Biodiversidad; II. Estado de conservación y tendencias de cambio; III. Políticas públicas y perspectivas de sustentabilidad; IV. Capacidades humanas e institucionales*.

⁵⁴⁷ SEMARNAT, CONAFOR, CONAMP, and CONABIO.

⁵⁴⁸ *Ley de Desarrollo Rural Sustentable*, Diario Oficial de la Federación, December 7 2001, last amendment, January 12, 2012; *Ley General de Desarrollo Forestal Sustentable*, Diario Oficial de la Federación, February 25, 2003, last amendment, January, 24, 2017; *Ley General del Equilibrio Ecológico y la Protección al Ambiente*, Diario Oficial de la Federación, January 28 1988, last amendment, January, 9 2015; *Ley General de Vida Silvestre*, Diario Oficial de la Federación, July 3, 2000 last amendment December 19 216.

6.2 The Natural Capital of Mexico: Ecological Capital and New Sites of Struggles for Indigenous Peoples

A reading of Mexican official documents on conservation issued by environmental agencies indicates that the Mexican policy strongly ties conservation activities with economic incentives. Nature is conceived as a reservoir of GRs and a provider of ecological services that throughout economic incentives can become integrated into the economic capital. Conservation is promoted through sustainable development, as a form of economic growth that favors more efficient use of resources.⁵⁴⁹ As I explained in Chapter 2, Mexico has embraced a conservation discourse that favors the capitalization of nature in the form of ecological capital.⁵⁵⁰

As described in the *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción* (Mexican National Strategy on Biodiversity and Implementation Plan-the Biodiversity Strategy)⁵⁵¹ and *Capital Natural de México*, (Natural Capital of Mexico)⁵⁵² objects of conservation are GRs, species and ecosystems. The latter are constructed as providers of services: from food to medicine; ecosystems also provide cultural services limited to tourism. As *Natural Capital of Mexico* reads:

Por capital natural, en este documento se entiende el conjunto de ecosistemas de nuestro país y los organismos que éstos contienen (plantas, animales, hongos y microorganismos), que por medio de sus procesos naturales en el ecosistema generan bienes y servicios ambientales indispensables para la sobrevivencia y el bienestar social, así como para el mantenimiento de la vida como la conocemos Ese capital natural es no solo comparable a los capitales “clásicos” (financiero, de infraestructura, etc.) de un país, sino que constituye el entramado necesario para mantener la actividad productiva generada por los otros capitales.⁵⁵³

⁵⁴⁹ For a broader debate on this topic, see Chapter 2.

⁵⁵⁰ In this matter see: Arturo Escobar, *Encountering Development. The Making and Unmaking of the Third World, The Making and Unmaking of the Third World*, 1995; Nail Harvey, “El Capitalismo Ecológico Y El Plan Puebla-Panamá: La Transformación de Los Recursos Naturales En Mesoamérica,” *Comercio Exterior* 54, no. 4 (2004): 319–27.

⁵⁵¹ Mexican Government, *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción*, 2016–2030.

⁵⁵² CONABIO, *Capital Natural de México: Acciones Estratégicas Para Su Valoración, Preservación y Recuperación*, 2012.

⁵⁵³ “In this document the term natural capital is understood as the group of ecosystems of our country and their organisms (plants, animals, fungi and micro-organisms). Throughout their natural processes in the ecosystem, they generate environmental goods and services crucial for the survival and the social wellness,

Nature is construed as a form of ecological capital whose components are capitalized through economic incentives. Salvador Anata, former director of the SEMARNAT in Oaxaca, explains that, so far, one of the main achievements of the CONABIO has been to promote the idea that conservation policy can be articulated with economic development.⁵⁵⁴ Since 2002, the environmental Federal agencies, SEMARNAT, CONANP, and CONAFOR, have promoted, in target areas for conservation, the program of payment for environmental service (PES) and the *Programa de Desarrollo Regional Sustentable* (Regional Program for Sustainable Development-PRODERS).⁵⁵⁵ The latter allocated public funds to encourage sustainable development activities in hot spot areas for conservation.

The interconnection of conservation and economic incentives has been further promoted with several projects financed by international institutions – e.g., the World Bank. These projects embrace an idea of conservation accompanied by development of economic activities, in which natural components are commodified. Some examples of these efforts are the multi-million dollar projects funded by the World Bank, the Mesoamerican Biological Corridor (MBC), established in Central America and southern Mexico in the late 1990s, and the *Proyecto de Conservación de la Biodiversidad en Comunidades Indígenas* (Indigenous and Community Biodiversity Conservation Project-COINBIO) established in the Mexican states of Oaxaca, Michoacán and Guerrero in 2000.

Furthermore, as Mexico is very rich in GRs, it has been object of interest for bioprospecting activities by transnational corporations and centers of research. One of the most famous project lunched in this matter was the International Cooperative Biodiversity Groups (ICBG) program that promoted an international collaboration based at the University of Arizona to collect ‘ethnobotanical knowledge’ about plant uses. This project involved several researchers from Mexico and other South American universities

as well as the permanence of life as we know it.... This natural capital is not only comparable to the classic ones (finance, infrastructure, etc.) of a country but it constitutes the necessary components to grantee the productive activity generated by the other capitals”. (My translation). Conabio, *Capital Natural de México: Acciones Estratégicas Para Su Valoración, Preservación y Recuperación*, 2012.

⁵⁵⁴ Interview Salvador Anta, November 14 2016 Oaxaca; file with the author.

⁵⁵⁵ SEMARNAT, *Acuerdo por el que se establecen las Reglas de Operación para el Programa de Desarrollo Regional Sustentable*, Diario Oficial, February 26, 2007.

sending extracts of medicinal plants to the University of Arizona and American Home Products.⁵⁵⁶

Broadly speaking, the Mexican legal framework has facilitated the commercialization of the natural components through bioprospecting activities at the detriment of indigenous collective rights over their resources. In fact, alternative ways of conceiving nature has been excluded from the legal framework. The Mexican legal framework on access and use of GRs and TK does not recognize indigenous collective rights over their TK and GRs;⁵⁵⁷ therefore, it has favored the misappropriation and misuse of indigenous GRs and TK.⁵⁵⁸ The promotions of these programs show that the Mexican policy on conservation has favored the commodification of natural components embracing a policy that, paraphrasing McAfee “sell[s] the nature to save it”.⁵⁵⁹

Concerning the privilege of modernity in shaping the objects of conservation, indigenous peoples’ epistemologies in the Mexican conservation discourse, emerges only in the form of indigenous TK. The Biodiversity Strategy does not open up to a ‘peer dialogue’ with indigenous peoples concerning the definition of the objects of conservation. In fact, the Strategy embraces an idea of ecosystems that separates nature from culture; it does not recognize the role that the latter has in shaping the former. The idea of ecosystem does not take into account the indigenous cosmovision, the ways they use and symbolize nature as in the case of biocultural diversity approach to conservation (see: Chapter 3).

Indigenous epistemology is relevant only in the form of TK. Indigenous TK is conceived as a reification of the indigenous culture, therefore, separated from the system of life that produces it. Consequently, TK is represented as an object to be inventoried and scrutinized under the Western scientific paradigm. In this matter, *Natural Capital of*

⁵⁵⁶ Hayden, “From Market to Market: Bioprospecting’s Idioms of Inclusion.”

⁵⁵⁷ A. Cañas, R. et al., “Cañas, R., A. Ortiz-Monasterio, E. Huerta, and X. Zulueta. “Marco Legal Para El Conocimiento Tradicional Sobre La Biodiversidad,” in *Capital Natural de México 1*, 2008, 557–64; Luciano Concheiro Borquez and Francisco Barcenás López, eds., *Biodiversidad Y Conocimiento Tradicional En La Sociedad Rural. Entre El Bien Común Y La Propiedad Privada* (Centro de Estudios para el desarrollo rural sustentable y la soberanía Alimentaria, 2006); Francisco Bárcenas López, “Recursos Genéticos, Conocimiento Tradicional Y Derecho Indígenas,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, E. Corona-Martínez, and Paul Hersch (Ibero Puebla: UNAM, INAH, 2011).

⁵⁵⁸ Ana Ortiz Monasterio Quintana, “¿Entre La Espada Y La Pared? Conocimiento Indígena Y Bioprospección En México,” *Ciencias*, 2006.

⁵⁵⁹ McAfee, “Selling Nature to Save It? Biodiversity and Green Developmentalism.”

Mexico reads that:

Buena parte del conocimiento tradicional está aún presente en los cientos de miles de miembros de comunidades rurales y requiere ser rescatado, estudiado y aplicado en el contexto de tecnologías más modernas..... en la actualidad ese conocimiento no está sistematizado ni organizado para que sea útil en la conservación y uso sustentable de los recursos biológicos, así como en otros aspectos relacionados con la salud humana.⁵⁶⁰

In this context, modern positive science is used as the norm to validate the indigenous system of knowledge for conservation purposes, reproducing the privilege of the Western epistemology system over others. As Alberto Betancourt Posada Betantour *et al.* argue, the Mexican state does not embrace a multicultural perspective on conservation; in fact, indigenous knowledge is relevant only as soon as it can be used for market purposes.⁵⁶¹ According to the authors, this model of conservation it is at odds with the indigenous ways of life, particularly: “el carácter sagrado de la naturaleza, la autosuficiencia alimentaria, el carácter público y comunitario de los conocimientos, o la libre circulación de información”.⁵⁶²

6.3 Territorial Planning and Management of Nature

As I introduced in the previous section, the implantation of the Mexican policy on conservation is accompanied by the adoption of specific instruments that regulate the planning (zoning) and management of the territory. In this part, I offer a brief overview of three relevant instruments: the protected areas (PAs), the *Ordenamiento Territorial*

⁵⁶⁰ “A vast part of the traditional knowledge is still present in hundred of thousands of members of rural communities and it needs to be rescued, studied and applied in the context of more modern technologies... nowadays, this knowledge is neither systematized nor organized to be useful in the sustainable conservation and use of biological resources, as well as other aspects related to human health.” (My translation). CONABIO, *Capital Natural de México: Acciones Estratégicas Para Su Valoración, Preservación y Recuperación*, 2012, pp. 29-30.

⁵⁶¹ Betancourt Posada, Alberto, Tihui Campos Ortiz, Griselda, Efraín Cruz Marín, José, Fritsche, Katja Jeglitzka, Elisabeth, Marion Lloyd, Ana Beatriz Pérez Galvis, Emilio Riva Palacio de Icaza, Marie Andrée Roy, “¿Cuánto Vale La Sabiduría Tradicional? El Papel Asignado a Los Conocimientos de Los Pueblos Originarios En El Capital Natural de México.”

⁵⁶² “the sacred character of the nature, the food sovereignty, the private and communal feature of the knowledge or the free circulation of information.” (My translation). Ibid, p. 98.

(Ecological Planning of the Territory -OT), and the *Plan de Manejo*, (Management Plan-MP).

These environment planning instruments have acquired a prominent role in implementing biodiversity discourse in the indigenous territories. In fact, they guarantee a coherent implementation of the federal conservation policy at the local level. These tools are regulated in the environmental legislation, in particular in the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (General Law of Ecological Balance and Environmental Protection-LGEEPA) and *Ley General de Desarrollo Forestal Sustentable* (General Law for Sustainable Forest Development- LGDFS).

The LGEEPA regulates the PAs as core instruments to conserve biodiversity in Mexico.⁵⁶³ The CONANP has promoted the creation of PAs since 2000. Today, 12.92 per cent of the Mexican surface is under this regime.⁵⁶⁴ Article 44 of LGEEPA defines the PAs as:

The national territory zones and those in which the nation exercises its sovereignty and jurisdiction, whose original environments have not been altered significantly by human activities or that require to be preserved and restored and are subject to the legal regime established under this law.⁵⁶⁵

The prevalent approach is to consider that human activities have little or no impact on the PAs. However, another characteristic of the Mexican system of the PAs is the interconnection of conservation policy with economic development. According to the LGEEPA, PAs are not wilderness areas unattached by human activities, but are areas devoted to specific activities and limited for others. In the PAs several activities linked to the idea of economic sustainable development can be conducted among them: sequestration of CO₂, bioprospecting of GRs, scientific research, environmental education, and ecotourism.⁵⁶⁶ Consequentially, the system of PAs in Mexico has allowed conservation while promoting economic sustainable activities.⁵⁶⁷

⁵⁶³ The PAs are regulated in the arts. 44-56 BIS, LGEEPA.

⁵⁶⁴ CONANP website, <http://www.conanp.gob.mx/english.php>.

⁵⁶⁵ Original text in Spanish: “Las zonas del territorio nacional y aquéllas sobre las que la nación ejerce su soberanía y jurisdicción, en donde los ambientes originales no han sido significativamente alterados por la actividad del ser humano o que requieren ser preservadas y restauradas y están sujetas al régimen previsto en la presente Ley”. See the definition of Protected areas in the art.3. II and art. 44, LGEEPA.

⁵⁶⁶ Art. 45, LGEEPA. See also: SEMARNAT, *Áreas destinadas voluntariamente a la conservación*, Consulta Temática, available at

This model of PAs subordinates conservation to the ‘economic rationality’⁵⁶⁸ and, as I describe in Chapter 2, promotes the commercialization of natural components that constitute the so-called ecological capital. LGEEPA establishes nine types of PAs, based on the main object of conservation.⁵⁶⁹ Each PA presents a specific territorial planning that establishes activities that can be conducted in each zone⁵⁷⁰ such as preservation, limited utilization, conservation, and restoration.⁵⁷¹

The OT and the MP are two of the core ecological-economic planning tools to implement conservation policy based on biodiversity paradigm. In 1994, with the constitution of the SEMARNAT, the OT has become a fundamental tool of territorial planning. As Anta *et al* argue, the OT has allowed the achievement of sustainable development while perusing ecological equilibrium.⁵⁷² The LGEEPA regulates this tool.⁵⁷³ The law establishes three kinds of OT: the federal, the state, and the municipal. Each one regulates the use of the soil at different scales. In general, the OT designs and promotes a certain use of the soils and economic activities, aims at preserving and sustainable managing natural resources. It describes the physical, biotic, and socioeconomic characteristic of a specific area and designs the ecological criteria for the preservation, the protection, the restoration, and the sustainable use of natural resources and for the implementation of economic activities.

Finally, the MP is another important instrument for planning economic and environmental actions. It is a technical tool for the design and implementation of actions and sustainable management of specific resources e.g. forest. *Ejido*, agrarian community,

http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D3_R_BIODIV04_09&IBIC_user=dgeia_mce&IBIC_pass=dgeia_mce (last Access September 25, 2016).

⁵⁶⁷ José Efraín Arellano López, Jessica Gabriela, Betancourt Posada, Alberto, Cruz Marín, “Murmullo de Sueños: Historia de La Ciencia, Diversidad Epistémica Y Conservación de La Biodiversidad En Las Áreas Naturales Protegidas de México,” in *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas*, ed. E. Cruz Betancourt, A., J. Arellano, T. Campos (UNAM, 2014).

⁵⁶⁸ Leff, *Racionalidad Ambiental: La Reapropiación de La Naturaleza*.

⁵⁶⁹ Art. 46, LGEEPA.

⁵⁷⁰ Art. 3 XXXIX, LGEEPA.

⁵⁷¹ Art. 47 BIS, LGEEPA.

⁵⁷² Anta Fonseca, Salvador, Arreola Muñoz, Arturo V., González Ortiz, Marco A., Acosta González, *Ordenamiento Territorial Comunitario: Un Debate de La Sociedad Civil Hacia La Construcción de Políticas Públicas*. For an overview on the genesis of the OT see: Miguel Angel Cancino Azuela, Antonio, Concepción Contreras, ed., *El Ordenamiento Ecológico Del Territorio En México: Génesis Y Perspectivas* (México DF: Secretaría de Medio Ambiente y Recursos Naturales, 2006).

⁵⁷³ Art. 3. XXIV, art.7. IX, and arts. 19- 20 BIS 7, LGEEPA.

and private subjects that want to participate in federal programs on sustainable development and conservation or that want to exploit environmentally sensitive target resources such as forests, have to submit the MP before environmental agencies for approbation. The MP is adopted with the technical support of the environmental agencies, based on criteria established at the federal level and its content becomes mandatory during the implantation of the policy. Because 70 per cent of the forest is under the communal system of property, the MP guarantees that the management, use and exploitation of this resource occurs in conformity with federally established criteria. Therefore, the MP is a key instrument for the state to maintain a form of control over communal lands.

To conclude, conservation policy is accompanied by several technical and legal instruments that have the potential to impose and shape the use of the territory. These instruments bear a certain idea of nature and use of territory; for this reason, the system of PAs, the OT and the PM can become privileged sites to analyze the impact that conservation policies are having on indigenous collective rights. As the following section will show, these instruments have to adapt to the presence of indigenous peoples that in Oaxaca hold legal title over their lands. The way the Mexican legal system accommodates cultural diversity through these legal, environmental tools can shed light in the way the state cope with cultural diversity and support the enjoyment of collective rights as enshrined in Constitution.

6.4 Adapting Conservation Policy to the Specificity of Oaxaca

Oaxaca is the most biodiverse state in Mexico, in which hotspots for conservation overlap with indigenous communal lands; therefore, it is a strategic territory to achieve the Mexican targets on conservation. Consequently, the implementation of the conservation policy has had to adjust to this peculiarity. Federal agencies and programs concerning conservation have had to integrate indigenous communities into the management of hotspot conservation areas.

The specificity of Oaxaca has markedly affected the federal implementation of the system of PAs in this state. Even if Oaxaca is the most biodiverse area in the country,

only eight out of 182 federal PAs have been declared in this region,⁵⁷⁴ representing only 3.3 per cent of the state surface.⁵⁷⁵ This has occurred because the majority of the Oaxacan territory is controlled by indigenous communities that have legal title over their resources -e.g. the forests.

Since the 1990s, indigenous communities have strongly opposed the implementation of the federal PAs policy, accusing the PAs to be a new form of expropriation of their lands and control over their territory.⁵⁷⁶ In this matter, the Oaxaca Indigenous Act contains a provision expressly dealing with PAs declared in indigenous territories. Article 54 establishes that the creation of PAs in indigenous lands requires an explicit agreement between indigenous peoples and the state.

As some commentators argue, the presence of communal property in Oaxaca was the rationale underlying the 1996 reform of the LGEEPA. This reform introduced a new category of PAs: the *Áreas destinadas voluntariamente a la conservación* (area of voluntary conservation- AVC).⁵⁷⁷ Under Article 77BIS, indigenous communities, as well as private subjects, can obtain a certification from the CONANP to devote a specific area of their property to conservation. To obtain the certification, the applicant needs to meet certain criteria: identify the area and the duration of the certification –not less than 5 years; submit a MP before the CONANP; and, in the case of indigenous peoples, obtain the authorization of the General Assembly. Once certificated, the area become a “productive area devoted to functions of public interest”⁵⁷⁸ and regulated under the federal PAs legal framework. Furthermore, the area needs to be managed according to the MP approved by the CONANP during the certification process. The MP is adopted with

⁵⁷⁴ SEMARNAT, CONANP, *Áreas Naturales Protegidas de México*, available at http://sig.conanp.gob.mx/website/pagsig/anps_decretadas/lista_anps.pdf (last access, September 26, 2016).

⁵⁷⁵ S Anta-Fonseca and Leticia Merino, “El Manejo Comunitario de Los Recursos Naturales En Oaxaca,” *The Common Property Resource* 66 (2003): 1–3.

⁵⁷⁶ In Oaxaca see the case of the indigenous resistance in the ‘Reserva Ecológica Camesina en Chimalapa’; Miguel Ángel García Aguirre, *Chimalapas: La Defensa Del Territorio Y de Los Bienes Naturales Como Un Factor de Identidad Indígena* (Ceccam, Brot für die Welt, 2015). Other cases of indigenous resistance against the creation of PAs in Mexico see: Antonio Azuela and Paula Mussetta, “Algo Más Que El Ambiente. Conflictos Sociales En Tres Áreas Naturales Protegidas de México,” *Revista de Ciencias Sociales (Universidad Nacional de Quilmes)* 1, no. 16 (2009); Nail Harvey, “Globalización, Ciudadanía Y Conflictos Por La Biodiversidad En Chiapas,” *Revista Memoria* 162 (2002): 13–18; James P. Robson and Fikret Berkes, “Sacred Nature and Community Conserved Areas.” Nature and Culture: Rebuilding Lost Connections, Earthscan/James & James,” in *Nature and Culture: Rebuilding Lost Connections*, Earthscan/James & James, ed. Sarah Pilgrim and Jules N. Pretty (Earthscan, 2010), 197–216.

⁵⁷⁷ Art. 46. XI, LGEEPA.

⁵⁷⁸ Art.55 bis, LGEEPA.

the technical support of the federal agency in order to comply with the federal criteria on management of PAs. The AVC has become an instrument to incorporate communal lands into the federal system of PAs.

Another important challenge has been including indigenous communities into the Mexican policy of biodiversity that promotes conservation while pursuing neoliberal economic targets. For this purpose, under the guide of the WB, the SEMARNAT has launched a policy of decentralization of forest management relying on indigenous communities as social capital. The implementation of a biodiversity paradigm in conservation on indigenous territory can be understood by looking at the development of the *Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México* (Community Forestry Project- PROFYMF).

6.5 Implementation of the Biodiversity Conservation in Oaxaca: the Case of PROCYMAF

The *Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México* (Community Forestry Project- PROFYMF) has strongly shaped the conservation policy in Mexico and particularly in Oaxaca. In 1997, the WB launched this program that the Mexican environmental ministry, SEMARNAT, and its agencies, CONANP and CONAFOR, implemented in selected states. In the first period 1997-2003 (PROFYMF I), the program was carried on in the states of Jalisco, Michoacán, Oaxaca, and partially Chihuahua and Durango; in the second phase 2003-2008 (PROCYMAF II), the program involved the states of Durango, Guerrero, Jalisco, Michoacán, Oaxaca, and Quintana Roo.

Oaxaca was the state in which indigenous peoples participated the most; in fact, the program was enacted in 117 communities⁵⁷⁹ out of 273 nationwide.⁵⁸⁰ As the

⁵⁷⁹ In the program participated the following entities: 98 agrarian communities; 15 *ejidos*; one enterprise and three organizations of communities: Unión de Pueblos Mancomunados, Unión de Comunidades Indígenas Resineras, and la Unión de Comunidades Productoras Forestales Zapotecas-Chinantecas de la Sierra Juárez (UZACHI).

⁵⁸⁰ SEMARNAT, CONAFOR, *Evaluación del Programa de Desarrollo Forestal Comunitario 2004 PROCYMAF II*, November 2004.

governmental official that implemented the program in Oaxaca, Salvador Anta, points out, the PROCYMAF was a WB pilot project aimed at shaping the Mexican environmental policy to meet the international strategy on conservation.⁵⁸¹

The WB embraced a biodiversity discourse in conservation, in which the decentralization of the forest management helped in achieving a model of conservation accompanied by sustainable development. According to the WB report on PROCYMAF, the main objective of the program was to “decentrali[ze] the management of forests through the promotion of indigenous communities and ejidos”⁵⁸² with the aims of: “a) improve natural resource management and conservation by community/ejido forestry resource owners; and b) increase the range of forestry-based income generating options available to community/ejido forestry resource owners.”⁵⁸³ As Anta reports, the PROFYMF influenced the adoption of the Mexican forestry law and future conservation and sustainable programs in the forestry sector.⁵⁸⁴ These programs have encouraged economic activities such as PES, ecotourism, and diversification of the forest productions (timber and non-timber products).⁵⁸⁵

PROCYMAF embodied a specific rational based on a novel approach of the WB to indigenous peoples and environmental issues. In this matter, two WB operational directives, one on indigenous peoples⁵⁸⁶ and the other on environmental impact of economic projects,⁵⁸⁷ marked a new path for the WB implementation of development projects. These directives expressed a new commitment of the WB in integrating indigenous rights and environmental assessment plans in the implementation of development projects. Elinor Ostrom’s economic theory of the commons influenced the WB approach on development project in indigenous lands. The Ostrom’s theory redeems indigenous communal institutions as functional instruments to achieve sustainable

⁵⁸¹ Interview Salvador Anta, November 14 2016 Oaxaca; file with the author.

⁵⁸² World Bank, *Project Performance Assessment Report Mexico First and Second Community Forestry Projects* (Loan Numbers 4137 and 7207), report. 55416 June 28, 2010, available at, <http://documents.worldbank.org/curated/en/552121468056077220/pdf/554160PPAR0P001fficial0Use0Onl1610.pdf>, p. XI.

⁵⁸³ WB, *Project Performance Assessment Report Mexico First and Second Community Forestry Projects* (Loan Numbers 4137 and 7207), report. 55416 June 28, 2010, p. xi.

⁵⁸⁴ Interview Salvador Anta, November 14 2016 Oaxaca; file with the author.

⁵⁸⁵ Interview Salvador Anta, November 14 2016 Oaxaca; file with the author.

⁵⁸⁶ World Bank, *Operational Directive Indigenous Peoples*, OD 4.20, September 1991.

⁵⁸⁷ World Bank, *Operational Directive Environmental Action Plans*, OD 04, 1989.

management of resources.⁵⁸⁸ In the past, under the Hardin's theory of 'the tragedy of the commons', only public and private institutions were considered capable of guaranteeing an efficient management of common resources.⁵⁸⁹

Starting from this new idea, the WB policy has considered indigenous communities as social capital (ethnic capital), whose institutions can favor the achievement of efficient economic development goals. However, as Hale argues, this approach has created new forms of inclusion and exclusion for indigenous peoples. As I have already illustrated, within a framework in which indigenous communities are conceived as a social capital, there is a new division between the good Indian, *indio permitido*, and the bad Indian. The good Indians build social capital and, being functional to the neoliberal market, are included in public policy and are entitled to collective rights. On the contrary, the bad Indians that do not participate in this process, are excluded and constructed as poor or marginal.⁵⁹⁰ As I will show in detail in the case-study, in this new process of inclusion and exclusion, indigenous epistemologies that do not fit biodiversity discourse, on which the Mexican conservation policy is built, are constructed as expressions of poverty or marginalization; therefore, they become objects of a process of modernization.

The WB documents on the PROCYMAF shed light on the rationale of the projects vis-a-vis the construction of the indigenous communities. The PROCYMAF promoted a new process of modernization of indigenous peoples by constructing them as poor farmers. As the WB project proposal reads: "[m]any of the forest communities are very poor and have not had the tools to make good use of the resources on their lands."⁵⁹¹ Consequently, they need to be technically capacitated to better manage their forestry resources. In particular, the capacitation of indigenous communities becomes the only alternative to achieve biodiversity conservation and sustainable development. In fact, as the WB document says: "[t]he alternative, namely to seek to impose such changes

⁵⁸⁸ Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*.

⁵⁸⁹ Hardin, "The Tragedy of the Commons."

⁵⁹⁰ Charles R. Hale, "Rethinking Indigenous Politics in the Era of the 'Indio Permitido,'" *NACLA Reports on the Americas. Report on Race, Part 1*, 2004.

⁵⁹¹ World Bank, *Project Appraisal, Document on a Proposed Loan in the Amount of US \$21.3 Million to the United Mexican States for the Second Community Forestry Project*, Report n. 26644, October 25, 2003, p. 3.

through a system of command and control, is not politically feasible nor would it be likely to be a successful strategy.”⁵⁹²

The indigenous epistemology systems, their holistic ideas of the interrelation between nature and human beings, their idea of territory, and their traditional agricultural system are not contemplated as a potential alternative. Yet, biodiversity conservation can be achieved only through a process of modernization and technological capacitation of the poor farmers to become competitive sustainable producers and stewardship of natural components that have a market value. Indigenous traditional institutions are pictured as dysfunctional due to poverty, political conflicts, and corruptions and are therefore in need of strengthening “for better resource management and the acquisition of technical knowledge required for competing in the marketplace.”⁵⁹³ The recovering of the ‘traditional’ institutions is not led by the need to find alternative ways of conservation based on indigenous epistemology, on the contrary, to meet the needs of the neoliberal market.

Based on this frame the project implemented several activities at the community level. First, the program promoted the capacitation of indigenous peoples to conserve and sustainably use their resources. That occurred through seminars, workshops and the involvement of new actors to support the communities in this process. For this reason, the PROCYMAF created a roster of professionals (mostly biologists, followed by forest engineers) and conservation NGOs (mostly created by biologists) to provide technical assistance to communities. Consequently, with PROCYMAF, in Oaxaca started an important collaboration between some indigenous communities and conservation NGOs. Some of these NGOs are still working with indigenous communities promoting sustainable and conservation programs.

Second, the program promoted the zoning of the indigenous communal territory through the adoption of the communal OT.⁵⁹⁴ This instrument has become a fundamental tool to translate the Mexican conservation policy at the local level. It guarantees that the

⁵⁹² World Bank, *Project Appraisal, Document on a Proposed Loan in the Amount of US \$21.3 Million to the United Mexican States for the Second Community Forestry Project*, Report n. 26644, October 25, 2003, p.3.

⁵⁹³ World Bank, *Project Appraisal, Document on a Proposed Loan in the Amount of US \$21.3 Million to the United Mexican States for the Second Community Forestry Project*, Report n. 26644, October 25, 2003, p.7.

⁵⁹⁴ During the program 274 communal OT were adopted.

activities that the communities carry on in their territory fit with the Mexican conservation strategy. The communal OT establishes the zoning of the communal land including areas devote to specific economic activities -e.g. agricultural and forest production, PES, and communal ecological areas. The community adopts the communal OT with the technical assistance of NGOs or SEMARNAT's technicians. Therefore, the participation of the communities in the process of adoption of the communal OT and the possibility of including indigenous approach and epistemology depends on the methodology applied by the conservation NGOs in working with the indigenous peoples.

Third, the PROCYMAF promoted the strengthening of indigenous institutions as social capital. Particularly, the program supported the adoption or reform of the *estatuto comunal*⁵⁹⁵ (for an overview on the *estatuto communal* as part of the indigenous legal system see: Section 4.6). The adoption of the *estatuto* was promoted to give legal certainty to the decisions and the participation of the community in the program. In particular, the adoption of the *estatuto* to promote a process of transcription of some of the oral customary norms of the community. During my fieldwork, some *comuneros* reported that the federal personnel promoted the adoption of the *estatuto* because it was better having written rules instead of oral.

Furthermore, the *estatuto communal* became the tool to translate the communal OT into the indigenous legal system and to give legal certainty to it.⁵⁹⁶ In fact, the LEGEEPA does not regulate the communal OT but only the federal, state and municipal OTs. Therefore, the inclusion of the communal OT into the *estatuto communal* becomes a path to give legal certainty to it and to guarantee its implementation. In fact, once approved by the indigenous Assembly, the communal OT becomes a norm that the community follows and respects.

Finally, the program promoted the adoption of ecological areas or reserves in the communities' territory. As I illustrated above, the communal land tenure system has prevented federal agencies from creating PAs in indigenous territory, in particular in Oaxaca. Consequently, the PROCYMAF circumvents this limitation by promoting the creation of communal ecological areas through the communal OT and *estatuto*. From the

⁵⁹⁵ During the program 353 *estatutos comunales* were adopted.

⁵⁹⁶ Jorge Anta Fonseca, Salvador, Arreola Muñoz, Arturo V., González Ortiz, Marco A., Acosta González, ed., *Ordenamiento Territorial Comunitario: Un Debate de La Sociedad Civil Hacia La Construcción de Políticas Públicas* (Instituto Nacional de Ecología, 2006).

first moment, environmental agencies promoted in these areas specific activities such as ecotourism, research, PSA. Particularly, under the LEGEPA, these areas can be certified before the CONANP and become part of the federal system of PAs. I will illustrate in detail this process in the case-study.

6.6 Indigenous Collective Rights at the Crossroads of Mexican Conservation Policy

Biodiversity discourse through the commodification of some natural components creates symbolic conflicts that translated into the legal field creates new tensions for the implementation of collective rights. The commodification of nature and the separation of the TK from the border cultural system have become relevant sites of struggle for indigenous communities and organization in Mexico. Here, I offer some examples of this ongoing debate. The commodification of natural components such as water, CO₂ and GRs has become a new terrain of symbolic conflicts between the official policy and legislation on conservation and the effective enjoyment of collective rights.

As I illustrated in Chapter 2, decolonial authors have criticized the commodification of natural components as a new form of colonization and control over indigenous territory and resources. That occurred because the state legislation privileges certain representations and uses of the resources, excluding others. This phenomenon can be described based on De Sousa Santos' analytical category of the sociology of absence.⁵⁹⁷ Indigenous ways of life are excluded from the definition of the objects of conservation due to the privilege of the Western modernity and Western positivist science. In fact, mainstream society constructs indigenous epistemologies as backward and non-functional to achieve progress. As consequence of this process of misrepresentation, indigenous epistemologies are excluded from the scientific debate that constantly defines and re-defines the objects of conservation.

As I showed, indigenous systems of knowledge are recognized in the public debate only as goods, and only if they pass the test of scientific scrutiny. The technologicalization and commodification of nature in the form of GRs and TK have

⁵⁹⁷ Santos Boaventura de Sousa, ed., *Another Knowledge Is Possible: Beyond Northern Epistemologies* (Paperback, 2007).

created a new terrain of symbolic and legal conflicts. Through bioprospecting, plants, seeds, natural resources, and culture are transformed into prospective goods for transnational corporations. The Mexican legal framework has facilitated the commercialization of the natural components through bioprospecting activities to the detriment of indigenous collective rights over their resources. In fact, alternative ways of conceiving nature has been excluded from the legal framework.

The Mexican legal framework on access and use of GRs and TK does not recognize indigenous rights to self-determination in the form of self-government and cultural sovereignty. In fact, the current legal system does not recognize indigenous peoples and communities as subjects of public law, therefore as entities capable of deciding and regulating access to their own TK and GRs.⁵⁹⁸ As a consequence, this scenario has favored the misappropriation and misuse of indigenous GRs and TK.⁵⁹⁹ This occurs also in Oaxaca where, *de jure*, the state Constitution recognizes indigenous communities as subjects of public law but *de facto* this level of autonomy cannot be totally exercised. The recognition of the indigenous customary legal system is limited to internal matters and it is unclear if they can regulate the access to GRs. In fact, under Mexican law, GRs are considered property of the state.

Looking at situated expertise of local communities from my fieldwork, it emerges that many indigenous members do not have a clear perception of the meaning of GRs and the use that universities or transnational corporations can make of them. Furthermore, the unclear legal framework on access and use of TK and GRs has favored third parties accessing indigenous knowledge and resources without proper consultation with the communities. For instance, the *Comisariado de Bienes Comunales* of the Santiago Lachiguiri reported many cases of university researchers that entered the communal territory without properly informing the community of the purpose of their visit or the results of their research. However, the participation in meetings, fora and the information

⁵⁹⁸ Cañas, R. et al., “Cañas, R., A. Ortiz-Monasterio, E. Huerta, and X. Zulueta. “Marco Legal Para El Conocimiento Tradicional Sobre La Biodiversidad”; Concheiro Borquez and Barcenás López, *Biodiversidad Y Conocimiento Tradicional En La Sociedad Rural. Entre El Bien Común Y La Propiedad Privada*; Barcenás López, “Recursos Genéticos, Conocimiento Tradicional Y Derecho Indígenas.”

⁵⁹⁹ Ortiz Monasterio Quintana, “¿Entre La Espada Y La Pared? Conocimiento Indígena Y Bioprospección En México.”

that circulates through conservationist and human rights NGOs has increased the awareness of the communities on this topic.

The analysis of the *estatutos comunales* and the interviews, I collected during my field work, show that some indigenous communities are bridging the legislative gap concerning the access and use of TK and GRs by regulating this matter in their customary legal systems. These communities introduced into their *estatutos* specific provisions that regulate the use of GRs and the procedure that members and non-members have to follow to access them.⁶⁰⁰ Furthermore, some communities use their customary legal system to state that the indigenous knowledge belongs to the community and it is part of the community immaterial heritage.⁶⁰¹ However, the federal legal framework does not recognize the competence of the indigenous customary legal system in regulating this matter; therefore, this lack of juridical certainty frustrates the indigenous rights over the GRs and TK.

The commodification of nature in the form of Payment for Ecological Services (PES) has been another relevant terrain of symbolic conflict with indigenous communities in Mexico. The promotion of PES in indigenous territory comes with the imposition of certain territorial planning designed by environmental agencies. This planning does not take into account the peculiarity of the indigenous relationship with its territory and nature. As Francisco Chapela, director of ERA,⁶⁰² explains this system of PES does not embrace a 'biocultural vision'; in other words, it does not recognize the important role of the communities in shaping and managing the lands and their holistic approach to the territory. On the contrary, the PES program links the benefits for conservation to the management or the preservation of specific patches of territory or specific resources (e.g. water). In this scheme, the indigenous holistic relationship with the territory is not taken into account.⁶⁰³ As I will illustrate in the case of Santiago, this

⁶⁰⁰ See: Estatuto Comunal, Santiago Teotlaxco; see also: Estatuto Comunal, Santiago Lachiguiri; and Estatuto Comunal Magdalena Teitipac.

⁶⁰¹ See: Estatuto Comunal, Santiago Teotlaxco; see also: Estatuto Comunal, Santiago Lachiguiri; and Estatuto Comunal Magdalena Teitipac.

⁶⁰² The *Estudios Rurales y Asesoría* (ERA) is a NGOs that offers technical assistance to communities that wants to embrace a sustainable management of their resources. Since the early 1990s, ERA has worked with several communities in Oaxaca, in particular in the Sierra Norte and it had participated in the PORCYMAF program.

⁶⁰³ Francisco Chapela ERA, November 21, 2016, Oaxaca. File with the author.

approach to conservation can jeopardize indigenous traditional agricultural systems, because it imposes an expression of a specific connection with nature.

Another critique concerns the unfair payment for ecological services that can lead to new forms of oppression and colonization. As some studies have shown, the compensation for the maintenance of the ecosystems services is undervalued compared with other market goods. Particularly, it cannot cover the value of the labor and activities employed by the communities.⁶⁰⁴ For this reason, some indigenous organizations point out that this form of conservation exploits the indigenous culture, leading to new forms of colonization and oppression.⁶⁰⁵ In fact, the communities rely on the *tequio* to maintain and manage the patches of lands devoted to the PES. As I illustrate in Section 4.7, the *tequio* is a fundamental expression of indigenous *comunalidad*. Employing the *tequio* in an economic operation that favors mostly transnational corporations or other economic actors favors new forms of indigenous exploitation. The PES does not recognize the community for the activities that for centuries have guaranteed the preservation of biodiversity, on the contrary, the PES commodifies natural components attributing a very low market value to them, therefore, it commodifies indigenous cultural expression such as the *tequio*.⁶⁰⁶

In addition, the PES creates new forms of dependency of the indigenous communities on state and international funds, without supporting the indigenous peoples' own projects.⁶⁰⁷ This can adversely impact their rights to autonomy and ultimately their survival as distinct peoples. Many communities have no alternative, and have to participate in the PES program. In fact, some communities have to choose between participation in environmental programs or accept the consequences brought about by the development of mega-projects in their lands. For example, in the case of Santa Maria Xadini, the community opted for PES as an economic alternative to avoid the encroachment of their ancestral lands brought about by the development of a mega tourist resort. However, the participation in environmental programs comes with several

⁶⁰⁴ Álvaro Salgado Ramírez, "Santiago Lachiguiri: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria," 2014.

⁶⁰⁵ Interview with Linares Gabriela, Guelatao de Juárez, Octubre 6, 2016. File with author.

⁶⁰⁶ UNSJO S.C. and Grassroots International, "UNSJO,S.C, Grassroots International, La Trampa de Las Áreas Naturales Protegidas Y El Pago Por Servicios Ambientales," Folleto (Oaxaca, n.d.).

⁶⁰⁷ Interviews with: Salvador Fonseca Anta, November 14 2016 Oaxaca; and Ariel Morales Reyes, November 16 2016 Oaxaca; file with the author.

obligations and restrictions for the communities, such as the need to adopt certain territorial plannings that impose certain uses of the lands. These tools are not neutral, but bear a specific idea of nature and of the relationship between nature and human beings that can be at odds with that of the community. Therefore, environmental programs can jeopardize indigenous self-determination, in the form of cultural sovereignty, by imposing new meaning and use over their territory.

The agronomist Chapela argues that as designed today, the PES program degrades local self-subsistence agriculture and therefore, community food sovereignty. In fact, the PES creates new forms of dependency of the community from the external market. As the agronomist explains, the money received from the program is often used to buy imported products that are cheaper than the local ones. In his opinion, the government should use these funds to support the local agricultural system, instead of the PES program.⁶⁰⁸ Furthermore, in the long run, the community becomes dependent on funds that can be cut or canceled at any moment.⁶⁰⁹

To sum up, the Mexican conservation policy is based on a biodiversity paradigm that does not engage in a peer dialogue with indigenous communities on the definition of the objects of conservation. This conservation paradigm is based on a certain idea of nature transformed in ecological capital. The implementation of economic incentives for conservation can adversely impact the indigenous community on several grounds: creating new forms of oppression and colonization; jeopardizing the cultural sovereignty and the food sovereignty; and not recognizing their ways of life by favoring misappropriation and misuse of their TK and GRs.

Finally, the conservation policy has created new sites of legal struggles. As illustrated above, the environmental policy is mostly implemented through secondary legal acts such as the OT, the certification and the *plan de manejo*. However, they can affect the effective enjoyment of indigenous collective rights recognized at a constitutional level. This occurs through a complex process of construction of meanings over the objects of conservation and symbolization of the territory and resources as well as, by misrepresenting the indigenous way of life. I will further develop this topic in the following chapter.

⁶⁰⁸ Francisco Chapela, November 21, 2016, Oaxaca; file with the author.

⁶⁰⁹ Francisco Chapela, November 21, 2016, Oaxaca; file with the author.

Chapter 7 Conservation Discourses and Indigenous Struggle over their Territory: an Insight from the Ground

This chapter, through situated experiences of indigenous communities, examines how indigenous communities use biocultural diversity discourse to re-appropriate their way of life in their territory; how conservation discourses are ‘vernacularized’ into indigenous customary legal systems and legal strategies. To address these questions I look at situated experiences of indigenous communities. Sections 7.1-7.5 test the potential of biocultural diversity discourse to sustain the enjoyment of collective rights with a case-study of an indigenous community in Oaxaca. In this case, the community used biocultural diversity discourse as a counter-narrative to the dominant discourse embedded in federal conservation policy. Furthermore, this section navigates the process of vernacularization of the biocultural diversity discourse into the community legal strategy and customary law as a means to re-appropriate its territory while respecting the community’s cosmovision.

One of the insights that emerges from the case-study concerns the growing role of non-human consistencies -e.g. Mother Earth, corn- into the legal system as a new symbolic field of conflict and emancipation. Section 7.7 will further develop this last topic. Through some examples collected during my field work, I will illustrate how the relationship between human beings and nature is injected into legal struggles and how environmental instruments can become emancipatory tools to enhance the right to self-determination.

7.1 The Case of Santiago Lachiguiri: Protecting the Indigenous Epistemology and Ancestral Agricultural System from the Governmental Approach to Conservation

The case-study shows how the implementation of a conservation policy based on biodiversity discourse, impacts the effective enjoyment of indigenous collective rights and how community, recovers its way of life in the territory and translates it into the customary legal system through biocultural diversity discourse. Conservation policy can adversely affect indigenous collective rights by imposing certain meanings over the territory and a certain management and use of the lands and resources that are at odds with that of the community.

In the case of Santiago Lachiguiri, federal conservation policy promoted a model of use and classification of the territory that adversely impacted the indigenous traditional itinerant practice of agriculture that is expression of a specific system of knowledge and way of life in the territory. In fact, under a biodiversity discourse, official conservation policy considers itinerant agriculture as a harmful environmental practice and officially promotes actions to eliminate it. Despite the Mexican position, itinerant agriculture is vital for both the economic subsistence of the community, and for its cultural survival. In fact, the itinerant model of agriculture guarantees the production of the corn that has a fundamental cultural meaning for the community. Furthermore, it embraces a specific way of relating to, and ‘using by conserving’ the forest. Finally, it reflects an holistic approach to the community’s territory.

To overcome the dominant discourse on conservation, farmers directly affected by the policy called for the assistance of a non-governmental organization (NGO) *Centro Nacional de Ayuda a las Misiones Indígenas* (Cenami). This NGO offered an alternative discourse to the dominant one in conservation. Rely on the idea of biocultural diversity, Cenami, with community participation, mapped the community’s use of the territory. This activity allowed the members of the community to recall how they use their lands and resources. The map showed that the management plan adopted by the governmental environmental agencies did not mirror the community’s use of its territory. Furthermore, in this process the NGO offered an anthropological and ecological evaluation of itinerant agriculture, showing its importance for both, the community way of life and the maintenance of biodiversity in this area.

In addition, with the support of the NGO, some members of the community took part at international meetings, in which they shared Santiago Lachiguiri's experience with other indigenous peoples in Latin America. These events gave the community an important political space of debate, in which to advocate for its traditional system of agriculture and for the role of indigenous peoples in conservation.

Through these experiences, the community was empowered to re-appropriate its way of life in and thinking about, the territory that the government policy had jeopardized. In fact, these experiences led the community's General Assembly to debate the importance of itinerant agriculture and the importance of corn to Santiago Lachiguiri identity, economic self-sufficiency, and territorial control. The General Assembly also concluded that the indigenous way of life, far from being environmentally dangerous, contributes to conservation, thus offering an alternative to the dominant model.

Because of this process, with the support of Servicio Mixe A.C (Ser Mixe), an indigenous legal NGO,⁶¹⁰ the General Assembly promoted two legal actions as expression of the right to self-determination. First, the Assembly applied to dismiss the Mexican policy and second, it amended the *estatuto comunal*. As Section 7.5 will show, biocultural diversity discourse penetrated into the community's legal documents and legal discourse, affirming indigenous identity and supporting collective rights.

7.2 The Indigenous Community of Santiago Lachiguiri: Agricultural System and Relationship with the Territory

Santiago Lachiguiri is a Zapotec pueblo in the Isthmus of the state of Oaxaca. It has been a self-governed community since the colonization period, when the Spanish Crown granted the *Titulo Primordiale* (original title). Under contemporary Mexican law, Santiago Lachiguiri is both an agrarian community and a *Municipio* (municipality).

⁶¹⁰ Ser Mixe is an indigenous NGO that offers legal support to indigenous communities in Oaxaca whose lawyers are members of the Mixe tribe. In recent years, the organization has offered legal support to several indigenous communities in Oaxaca and has handled leading legal domestic cases on indigenous human rights. The most recent case concerned the right to access water in Oaxaca. The founder of Ser Mize, Floribersto Diaz, was one of the main indigenous intellectuals and the author of several books on the idea of *comunalidad*.

Based on the Agrarian law, in 1997 the *tribunal unitario agrario* (agrarian tribunal) legally recognized it as an agrarian community with juridical personality and its own patrimony.⁶¹¹ Santiago Lachiguiri is also a *Municipio* based on the on the ‘*uso y costumbre indígenas*’ (indigenous customary legal system) as established in the political and electoral procedural code. Consequently, this pueblo enjoys a high level of autonomy under the Mexican legal system.

The community’s economy is based on cultivation of corn, beans, squash, and *chilacayot* for home consumption or local markets,⁶¹² and coffee for the organic market.⁶¹³ The coffee is marketed and distributed by two cooperatives of local farmers: the Unión de Comunidades Indígenas de la Región del Istmo (Uciri), and the Coordinadora Estatal de Productores de Café del Estado de Oaxaca (Cepco).

The local farmers cultivate according to a traditional itinerant system called *sistema de acahuales* or *roza tumba y quema*, or *milpa* (swidden agriculture or slash and burn).⁶¹⁴ This agricultural practice has guaranteed the cultivation of the *milpa* (corn) in the forest for centuries. Swidden agriculture consists of cyclical cultivation of small patches of forest by slashing thin woody vegetation and then felling trees, leaving one-meter-high tree stumps, cutting and chopping the branches so that they dry better, opening firebreaks in the burned areas, and setting off the fire when the vegetation is as dry as possible, timing the burn as close as possible to the first rains.⁶¹⁵

Another characteristic of the traditional agricultural system is the combination of multiple crops (corn, beans, and squash), which guarantees the diversification of production (pluri-cultivation); clearing and planting of basic grains is followed by a long fallow period that includes continual harvesting of perennial species, such as beans,

⁶¹¹ Santiago Lachiguiri, *Estatuto Comunal*.

⁶¹² Niels Barmeyer, “Local Effects of Global Forest Conservation Policy: On Zapotec Resistance,” in *Fields and Forests Ethnographic Perspectives on Environmental Globalization*, ed. Münster Ursula, Daniel Münster, and Stefan Dorondel (RCC Perspectives, 2012).

⁶¹³ Ivett Peña Azcona, “Percepción Socio Ambiental de Las Áreas Destinadas Voluntariamente Para La Conservación En El Istmo Oaxaqueño” (El Colegio de la Frontera Sur, 2015).

⁶¹⁴ Salgado Ramírez, “Santiago Lachiguiri: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria.”

⁶¹⁵ Estuardo Lara Ponce, Laura Caso Barrera, and Mario Aliphat Fernández, “El Sistema Milpa Roza, Tumba Y Quema De Los Maya Itzá De San Andrés Y San José, Petén Guatemala,” *Ra Ximhai*, 2012.

squash, and fruit trees.⁶¹⁶ In keeping with the system of pluricultivation, coffee is also planted in the forest⁶¹⁷ along with other crops.⁶¹⁸

In Santiago Lachiguiri, the *roza tumba y quema* has been practiced for centuries. The *roza tumba y quema* is an ancestral indigenous practice transmitted for generations, which has deeply shaped their territory and has guaranteed the production of corn for centuries, in a way that respects their forest and assures multiple harvests.⁶¹⁹ While mainstream agricultural policy views *roza tumba y quema* as destructive, indigenous customary law regulates it and imposes sanctions in cases in which it is abused.⁶²⁰



Figure V *Santiago Lachiguiri Landscape Shaped by the Itinerant Agriculture*

⁶¹⁶ Betty Bernice Faust, "Maya Environmental Successes and Failures in the Yucatan Peninsula," *Environmental Science and Policy*, 2001.

⁶¹⁷ This system of cultivation is known as: shade-grown coffee.

⁶¹⁸ Patricia Moguel Toledo, Víctor M., "El Café En México, Ecología, Cultura Indígena Y Sustentabilidad," *Ciencias* 43 (1996).

⁶¹⁹ Interviews with Delfino Mendoza, October 27, 2016; Arsenio Ororio, October 28, 2016, Santiago Lachiguiri. File with author.

⁶²⁰ Interview with Bulmaro Gonzalez; Costantino Galvan Toledo, October 21, 2016, Santiago Lachiguiri. File with author.

The cultivation of corn is part of communal identity, and has a special social economic and cultural meaning for the Santiago Lachiguiri peoples. As emerges from the interviews, it underpins the community's self-sufficiency, even during times when it does not enjoy other sources of income.⁶²¹ Furthermore, as Erman Eduardo Lopez Garcia explains, the relationship of the community with corn is deep:

el maíz es para nosotros, lo que era en principio, es vida; no es el simple hecho de trabajar por trabajar, si no que la esperanza que con este trabajo yo puedo sostenerme, no a mí, adamas mi hija mi esposa y también el pueblo en su conjunto.... Por lo tanto, el maíz para mí es la vida, no sé cómo decir esta cuestión....⁶²²

The community also has a strong centuries-long connection with the forest. It is the main source of water, plants, animals, and "sacred food for the family"(corn).⁶²³ For the community itinerant agriculture and the forest are interdependent. As the farmers report, with their work, they have given "life to the soil"⁶²⁴ and have guaranteed the preservation of the forest for centuries. They use the forest, but at the same time they give back to it without destroying it.⁶²⁵

Some parts of the forest are venerated as spiritual sites that represent the connection of the community to nature and God, linked to stories transmitted by the elders and farmers' rituals related to cultivation cycles. For instance, *Cerro del Rayo* is a place in the forest where, on May first, farmers gather to conduct rituals and prayers for rain.⁶²⁶ Some inhabitants still practice traditional medicine using forest plants, even if the process of modernization has jeopardized it with the introduction of chemical medicines

⁶²¹ Interviews with: Leonicio Villa Nueva. October 27, 2016, Santiago Lachiguiri. File with author.

⁶²² "To us, corn is still what it was in the beginning. It is life, not just the product of futile work, but also the hope that I will be able to sustain myself, as well my daughter, my wife, and our community as a whole. Therefore, corn is life". (My translation). Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

⁶²³ Interviews with: Bulmaro Gonzalez; Eloisa; Pascuci Orazio; Commisariado Flayrian; Leonicio Villa Nueva. File with author.

⁶²⁴ Interviews with Bulmaro Gonzalez and Rolando Benioio Morales. File with author.

⁶²⁵ Interview with Pascuci Orazio, October 26, 2016, Santiago Lachiguiri. File with author.

⁶²⁶ Interview with: Bulmaro Gonzalez, October 26, 2016, Santiago Lachiguiri. File with author.

and the assimilation of their culture.⁶²⁷ For instance, Eloisa, the *curandera* (medicine-woman) of Santiago Lachiguiri, tries to transmit this knowledge to future generations.⁶²⁸

The next section will offer a brief overview of the Mexican State's approach to indigenous agriculture, comparing a biodiversity discourse on conservation with a biocultural diversity discourse to show their impact on the legal framework of indigenous agricultural practice and identity.

7.3 Traditional Agriculture and Conservation Discourses

The Mexican policy has adversely affected the indigenous traditional agriculture system since the 1940s. During the period of the so-called 'green revolution',⁶²⁹ Mexico promoted a policy of economic modernization of indigenous agricultural production⁶³⁰ (Section 5.2). Under a modernization discourse, the *roza tumba y quema* and the indigenous subsistence system of agriculture, were labeled as conservative, backward, anti-progressive practices⁶³¹ that were to be abandoned in favor of a modern productive system of agriculture.

This posture continued during the neoliberalization of the agricultural sector, after the adoption of the Nafta. As a consequence of this treaty, the main federal agricultural program –PROCAMPO– subsidizes only those farmers who convert their lands to meet the international market demands. The representation of the traditional agriculture as environmentally damaging can also be seen in the report of the Organization for Economic Cooperation and Development (OECD). OECD, speaking about the positive impact of the implementation of PROCAMPO, points out that the program should have

⁶²⁷ Interview with Pascuci Orazio, October 26, 2016, Santiago Lachiguiri, file with author.

⁶²⁸ Interview with Eloisa, October 26, 2016, Santiago Lachiguiri, file with author.

⁶²⁹ Tomás Saldaña Martínez, "Historia de La Agricultura En México," in *III Taller Latinoamericano Prevención de Riesgos En El Uso de Plaguicidas* (Xalapa, Veracruz, 1983).

⁶³⁰ Elena Lazos Chavero, "Diálogos de Saberes: Retos Frente a La Transnacionalización de La Agricultura En México," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Paul Hersch Argueta, Arturo, E. Corona-Martínez (Ibero Puebla, México: UNAM, INAH, 2011).

⁶³¹ Gonzalo Báez-Jorge. Aguirre Beltrán, *Regiones de Refugio: El Desarrollo de La Comunidad Y El Proceso Dominical En Mestizoamérica* (Mexico: Universidad Veracruzana Instituto Nacional Indigenista Gobierno del Estado de Veracruz Fonod de Cultura Económica, 1991), pp. 132-137 .

promoted an environmentally sustainable agricultural system, for example, by reducing the ‘slash and burn’ practice, prevalent in the past.⁶³²

Framing the discourse on progress/regression, backwards/forwards, past/future dichotomies, the government labels indigenous agricultural knowledge as something relegated to the past, which is therefore unsuitable to the current historical moment. Salvador Anta, former director of the SEMARNAT in Oaxaca, relies on this narrative to describe the risk of transplanting this practice in an era of globalization. He argues that slash-and-burn agriculture poses some problems because this practice can be managed only under certain demographic, cultural and market conditions. According to Anta, this practice is ill-suited to modern conditions because globalization reduced the land area available for agriculture, and caused a loss of indigenous ancestral knowledge concerning the management of slash and burn agriculture, resulting in uncontrolled fires.⁶³³

This narrative also informs Mexican conservation policy based on a biodiversity paradigm. Modern biodiversity discourse, as illustrated in Chapter 2, constructs nature as a reservoir of genetic resources and provider of ecological services. Therefore, under this paradigm, forests become relevant as a service that, for instance, can contribute to carbon sequestration or water conservation. In this context, the prevalent scientific literature embraces a discourse that conceived of itinerant agriculture as environmentally unsustainable due to a lack of technological tools to control fire, changing demographic conditions, and high levels of production of CO₂ during burning.⁶³⁴

As residents of Santiago Lachiguiri’s point out, focusing on the sequestration of CO₂ as the main function of the forest, the prevalent scientific position does not take into account the paramount role of fire in the process of agricultural production and diversification of vegetation.⁶³⁵ Consequently, the mainstream position considers the *roza tumba y quema* as one of the main causes of CO₂ pollution and deforestation.⁶³⁶

⁶³² OECD, “Review of Agricultural Policy in Mexico,” 1997, p. 21.

⁶³³ Interview Salvador Anta, November 14, 2016 Oaxaca. File with the author.

⁶³⁴ Miguel Salinas, Margaret Skutsch, and Jon Lovett, “La Roza Tumba Y Quema En El Contexto de REDD+,” in *Estado Actual Del Conocimiento Del Ciclo Del Carbono Y Sus Interacciones En México: Síntesis a 2015*, 2015. For an overview of the debate see: Michael R Dove et al., “Globalisation and the Construction of Western and Non-Western Knowledge,” in *Local Science Vs Global Science*, 2009.

⁶³⁵ Interviews with several farmers.

⁶³⁶ For a representation of this discourse in the media see: Jorge López Arévalo, “Chiapas Y El Sistema Roza, Tumba Y Quema: Producir CO₂ Y Reproducir Miseria,” *Chiapas Paralelo*, April 14, 2014, <https://www.chiapasparalelo.com/opinion/2014/04/chiapas-y-el-sistema-roza-tumba-y-quema-producir->

This approach has penetrated into the Mexican legal system, affecting conservation programs. As an example, Article 101 of the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (LGEEPA- General Law of Ecological Balance and Environmental Protection), in addressing the preservation and sustainable use of soil and resources, promotes: “El cambio progresivo de la práctica de roza, tumba y quema a otras que no impliquen deterioro de los ecosistemas, o de aquéllas que no permitan su regeneración natural o que alteren los procesos de sucesión ecológica.”⁶³⁷

This construction of the traditional agriculture as environmentally negative has also penetrated into the indigenous customary legal system. As the Article 178 of the estatuto comunal of the indigenous community of Santa María Xadani states:

Con el objeto evitar la fuga de nuestro carbono que durante muchos años nuestros bosques han capturado y, debido a las condiciones topográficas, geológicas y edafológicas de nuestro territorio, que provocan una alta fragilidad del terreno a problemas de erosión y pérdida de fertilidad ante sistemas de cultivo basados en la roza-tumba y quema, así como de abrir la posibilidad de incorporar a la Comunidad en la estrategia REDD+, está práctica se irá cambiando paulatinamente por un sistema de roza-tumba y pica.⁶³⁸

This norm proves that the negative construction of the traditional agricultural system under a biodiversity paradigm can also penetrate into the indigenous legal system.

As Anta argues, federal and state personnel share skepticism toward the traditional farmers’ system of knowledge. This vision, as Anta explains, is rooted in the idea of superiority of technological knowledge to traditional knowledge as a consequence of which traditional farmers are conceived of as needing the Government’s support and

co2-y-reproducir-miseria/. Jorge Castañeda, “Roza, Tumba Y Quema Destruye Miles de Hectáreas En México,” *Foro Ambiental*, 2016, <http://www.foroambiental.com.mx/roza-tumba-y-quema-destruye-miles-de-hectareas-en-mexico/>.

⁶³⁷ “the improved transition from a slash-and-burn agriculture method to others that do not implicate or deteriorate the ecosystem or those that do not allow their natural regeneration or that alter the processes of ecological succession.” (My translation), Art. 101.II, LGEEPA; SEDAFPA, *Sistema de Roza, Tumba y Quema*, available at <https://www.youtube.com/watch?v=ysOfqO0f6L8>, Técnica de quema agrícola es peligrosa, La historia de hoy, available with <https://www.youtube.com/watch?v=ggY5kX80BYs>

⁶³⁸ “With the goal of preventing the leak of the CO₂, which for a long time our forest has captured, and due to topographical, geological and edaphological conditions of our territory that cause high fragility, erosion, and loss of fertility of the soil before an agricultural system based on the practice of the slash-and-burn, as well as the possibility of including the community in the REDD+ strategy, this practice will be gradually changed to a system of slash-and-chop.” (My translation). Art. 178, Estatuto Comunal Santa María Xadani, September 28, 2014.

help.⁶³⁹ This mentality is slowly changing thanks to the farmers' protest movement, which has made its position known through social media.⁶⁴⁰

As describe in Chapter 2, mainstream biodiversity discourse excludes the interdependence of humans and nature in ecosystems. Because of this perspective, Mexican conservation policy targets specific areas, regardless of their complex interrelationships with the human beings. In particular, environmental policy embraces a sectorial focus, without recognizing that the existing landscape is the product of the interrelationship between nature and culture. Furthermore, under this approach, an area devoted to conservation has to be converted for sustainable economic activities such as neoliberal market –ecotourism and sequestration of CO₂

As illustrated in Chapter 3, biocultural diversity discourse offers an alternative to mainstream biodiversity. This discourse focuses on the relevance of the interrelation between nature and human beings in conservation. In other words, under this discourse, ethnoecologists and biologists embrace a more holistic approach to conservation and recognize the relevance of the cultural dimension of the interdependence between humans and nature. Consequently, they have environmentally rehabilitated the *roza tumba y quema*, as well as the ecological relevance of the indigenous agricultural system.⁶⁴¹

Some studies have shown the positive impact of this practice in creating and maintaining high level of biodiversity.⁶⁴² As Betty Bernice Faust explains:

[t]his traditional swidden produces patches of new growth in the forest, increasing biodiversity (by allowing space for new growth of those species requiring sunlight during their early stages of growth), and providing good forage

⁶³⁹ Interview Salvador Anta, November 14, 2016, City of Oaxaca. File with the author.

⁶⁴⁰ Interview Salvador Anta, November 14, 2016, City of Oaxaca. File with the author.

⁶⁴¹ Tomas Martínez et al., "Historia de La Agricultura En México," *Revista de Geografía Agrícola*, 2003; Lara Ponce, Caso Barrera, and Aliphath Fernández, "El Sistema Milpa Roza, Tumba Y Quema De Los Maya Itzá De San Andrés Y San José, Petén Guatemala."

⁶⁴² For a review of the literature on this topic see: Elena Lazos Chavero, "La Milpa En El Sur de Yucatán: Dinámica Y Crisis," *Estudios de La Cultura Maya*, 1999, Christine Padoch and Miguel Pinedo-Vasquez, "Saving Slash-and-Burn to Save Biodiversity," *Biotropica*.

for many wild species of fauna—including the favorite game animals of human communities.⁶⁴³

Conservationist NGOs and scholars have also conducted studies that show the strong interrelation between traditional shade-grown coffee and the presence of the biodiversity.⁶⁴⁴ Furthermore, other authors argue that *roza tumba y quema* is also a system to decrease the destructive effects of fire in forests.⁶⁴⁵

Finally, scholarship has focused on the social impact of the *roza tumba y quema*, for instance, showing its relevance in guaranteeing the subsistence of indigenous families while conserving biological diversity.⁶⁴⁶ In this regard, Christine Padoch and Miguel Pinedo-Vasquez call for more research on the *roza tumba y quema* because of:

the potential payoffs would be great, including the conservation of much biodiversity with special meaning to human communities, and the conservation and even creation of cultural diversity that has long been part of the diversity, complexity, and dynamism of swidden and smallholders.”⁶⁴⁷

To sum up, biocultural diversity discourse moves away from the original explanatory modern framework of progress. Under this discourse, the indigenous knowledge is no longer relegated to the past, but is a part of the ecosystem that needs to be preserved. However, a biodiversity perspective prevails in the Mexican conservation policy. The clash between the biodiversity approach and the indigenous way of living the

⁶⁴³ Betty Bernice Faust, “Maya Environmental Successes and Failures in the Yucatan Peninsula,” *Environmental Science and Policy*, 2001.

⁶⁴⁴ S Anta Fonseca, “El Café de Sombra: Un Ejemplo de Pago de Servicios Ambientales Para Proteger La Biodiversidad,” *Gaceta Ecológica*, 2006; Toledo, Víctor M., “El Café En México, Ecología, Cultura Indígena Y Sustentabilidad.” See also, interview with Bolanos Mario, December, 8 2016, City of Oaxaca. File with author.

⁶⁴⁵ Faust, “Maya Environmental Successes and Failures in the Yucatan Peninsula.”; Amarella Eastmond and Betty Faust, “Farmers, Fires, and Forests: A Green Alternative to Shifting Cultivation for Conservation of the Maya Forest?,” in *Landscape and Urban Planning*, 2006.

⁶⁴⁶ Lara Ponce, Caso Barrera, and Aliphat Fernández, “El Sistema Milpa Roza, Tumba Y Quema De Los Maya Itzá De San Andrés Y San José, Petén Guatemala.”

⁶⁴⁷ Padoch and Pinedo-Vasquez, “Saving Slash-and-Burn to Save Biodiversity, p. 552.

territory strongly emerges in the implementation phase of the Mexican conservation policy. The experience shared by some biologists can help in understanding this point.

In Oaxaca, after the launch of the PROFYMAF program (Section 6.5), conservation NGOs⁶⁴⁸ have acquired a prominent role in implementing environmental policy at local level. Conservation NGOs, which work with indigenous communities in Oaxaca, report several areas of misunderstanding/clashes between the official conservation policy and indigenous ways of live. In particular, they stress the incompatibility of indigenous holistic approaches to territory with the federal sectorial approach to it.

As emerges from the interviews I collected during my fieldwork,⁶⁴⁹ biologists have often played a role of ‘epistemological intermediary’⁶⁵⁰ between governmental environmental agencies and indigenous peoples, in order to adapt conservation policy to the local conditions. The experience of the biologist Fernando Mondragón, Director of GeoConservacion, an NGO that works with some indigenous communities in Chinantla, the most biodiverse area of Oaxaca, illustrates this conflict.

In this region, indigenous groups have always practiced the *roza tumba y quema*; however, when the communities participated in conservation programs, federal environmental agencies opposed it for its impact on the implementation of the Payment for Ecological Services (PES).⁶⁵¹ As Fernando stresses, in his experience, two main issues of underly conflicts between Mexican environmental agencies and indigenous communities: differences in the way the parties conceive of the territory and disagreements concerning the land tenure system. In fact, indigenous communities embrace a holistic approach, in which conservation of the forest cannot be separated from

⁶⁴⁸ These NGOs are mostly composed by biologists.

⁶⁴⁹ Interviews with biologists of the following conservation NGOs: Grupo Mesofilo; ERA; GAIA; GeoConservation. These organizations, mostly composed of biologists, have started working with indigenous communities in Oaxaca under the PROCYMAF program. They have offered communities technical assistance in the elaboration of the OT, *plan de manejo* and in participating in environmental initiatives.

⁶⁵⁰ In her book, Cori Hayden uses the term ‘epistemological advocacy’ to describe the relationship between ethnobiologists and indigenous peoples under a biodiversity paradigm. She uses this term to describe how ethnobiologists, through their participation in courts and in other formal settings, advocated for the existence of an indigenous system of knowledge that should be recognized under the biodiversity paradigm. Here, I prefer use the term intermediary, because in many cases the conservation NGOs had to find a middle ground between the community’s way of living and environmental policy. Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*.

⁶⁵¹ Interview with Fernando Mondragón, November 21, 2016, City of Oaxaca. File with author.

the rest of the territory and from the human activities. In this sense, the *roza tumba y quema* is part of a broader system that has guaranteed for centuries the existence of the forests.⁶⁵² As Fernando points out, the government does not consider the *roza tumba y quema* as a conservation practice; on the contrary, it view it as an obstacle to the creation of areas of PES. Furthermore, embracing an approach that separates nature from human beings, the Mexican Forestry Agency (CONAFOR) requires the construction of firebreaks around agricultural parcels where *roza tumba y quema* is practiced. However, the government does not compensate the community under the PES scheme for the construction of the firebreaks. Furthermore, the environmental programs are designed based on a private property model; therefore they do not factor in the indigenous collective land tenure system and the itinerant use of the lands in indigenous communities.⁶⁵³

Other biologists share Fernando's experience in implementing environmental conservation policy in indigenous territories. For instance, Marco Antonio Gonzalez, the director of Gaia, a conservation NGO that works with indigenous communities in the coast of Oaxaca, speaks about a territorial dilemma.⁶⁵⁴ The Mexican State promotes policies based on a sectorial approach to the territory, while indigenous communities embrace a holistic ecological approach. For instance, government's agricultural policy looks at single crops instead of considering the *milpa* as a complex system of pluri-cultivation.⁶⁵⁵ Similarly, the government's conservation policy does not embrace an 'ecosystem approach' to conservation.⁶⁵⁶ According to Marco Antonio, conservation programs analyze territory looking at single resources such as forest, plants, and water-without taking into account the complex interrelationships among them. This approach is opposite to that of indigenous communities, which embrace a more holistic approach in caring for their territories.⁶⁵⁷

The next section will look closely at the impact that the implementation of conservation policy on the Santiago Lachiguri community.

⁶⁵² Interview with Fernando Mondragón, November 21, 2016, City of Oaxaca. File with author.

⁶⁵³ Interview with Fernando Mondragón, November 21, 2016, City of Oaxaca. File with author.

⁶⁵⁴ Interview with Marco Antonio Gonzalez, November 16, 2016, City of Oaxaca. File with author.

⁶⁵⁵ Interview with Marco Antonio Gonzalez, November 16, 2016, City of Oaxaca. File with author.

⁶⁵⁶ Interview with Marco Antonio Gonzalez, November 16, 2016, City of Oaxaca. File with author.

⁶⁵⁷ Interview with Marco Antonio Gonzalez, November 16, 2016, City of Oaxaca. File with author.

7.4 Mexican Conservation Policy in Santiago Lachiguiri

In the first decade of the Twenty-first Century, the Mexican federal environmental agencies SEMARNAT, CONANP and CONAFOR included Santiago Lachiguiri among the priority areas for conservation and sustainable development. In fact, Santiago Lachiguiri has vast and diverse vegetation and water resources that are key for the surrounding areas. Therefore, Santiago Lachiguiri became a target for the implementation of four federal programs: PROCYMAF, Payment for Environmental Service (PES), *Programa de Desarrollo Regional Sustentable* (PRODESR- Regional Program for Sustainable Development), and Protected Areas (PAs).⁶⁵⁸

Under PROCYMAF, technicians⁶⁵⁹ contacted by CONAFOR adopted OT (ecological planning),⁶⁶⁰ and the *plan de manejo* (development planning) for the area; these documents were propaedeutic for the development of future programs and activities. As Cenami reports, the technicians elaborated the OT without the participation of Santiago Lachiguiri's inhabitants. Furthermore, they followed the standard zonification scheme provided by the law that divides the territory into the following zones: utilization, conservation, preservation and restoration.⁶⁶¹ As a result, the OT did not mirror the way the community uses, lives in, and gives meaning to its territory. In addition, the OT categorized the areas cultivated according to the itinerant agriculture methods as zones of ecological conflict (*zonas de conflictividad*).⁶⁶²

Following the OT, governmental technicians elaborated the *plan de manejo* that suggested the implementation of economic activities according to ecological characteristics. In particular, the plan proposed to supplant the itinerant agricultural

⁶⁵⁸ The information concerning environmental programs comes from Salgado Ramírez, "Santiago Lachiguiri: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria."; and the interviews conducted among the community.

⁶⁵⁹ The NGO *Grupo Mesofilo* elaborated the OT as requested by CONAFOR. Interview with Bolanos Mario, December 8, 2016, City of Oaxaca. File with author.

⁶⁶⁰ Ordenamiento Ecológico Territorial Integrado: Santiago Lachiguiri/Procymaf, Noviembre 2002, 5.9, p. 21.

⁶⁶¹ Aprovechamiento, conservación, preservación o restauración.

⁶⁶² "Terminación, Cancelación O Anulación O Terminación Anticipada de La Certificación Número CONANP-03/2003 'Zona de Preservación Cerro de Las Flores'" (File with the author, 2010).

system with the cultivation of corn and peaches by small groups of farmers with external assistance and financial support.⁶⁶³

In 2003, based on the OT and *plan de manejo*, CONAFOR, CONANP, and SEMARNAT, offered the community of Santiago Lachiguiri the opportunity to participate in three environmental programs- PES, PRODERS and PAs. The General Assembly and the *comisariado de bienes comunales* accepted the programs even if the community was not properly informed of the effects and the exact content of each one.⁶⁶⁴ Consequently, Santiago Lachiguiri entered the PES program for the hydrologic services provided by the forest.

Under this program the community received economic compensation in exchange for maintaining unaltered the area that the federal technicians designated. Therefore, the program prevented the community from carrying on any kind of activity in this area. Furthermore, the compensation was not enough to cover the costs sustained by the community to maintain this area⁶⁶⁵ and to subsidize the loss of economic incomes coming from the abandoned cultivations.⁶⁶⁶ Contemporary to the PES, the federal personnel proposed the implementation of PRODERS. This program gave the community a grant for implementing sustainable activities mandated at the federal level, such as management of white deer, ecotourism, battling the water, and planting agro-fuel.

As some farmers report, the economic activities that the federal government proposed did not fit with a community mostly devoted to subsistence agriculture and cultivation of coffee.⁶⁶⁷ As some farmers argued, federal agencies, in their efforts to overcome the itinerant agricultural system, promoted the production of corn and peaches and the abandonment of the fire and rotation technique. However, as the farmers point out, this kind of agriculture is not suitable to forest soil and it would have adversely affected the production of corn.⁶⁶⁸ As Gonzalez explains, in itinerant agriculture, the fire process releases substances that fertilize the soil, increasing its productivity. Furthermore,

⁶⁶³ Ibid.

⁶⁶⁴ Interviews with several community's members.

⁶⁶⁵ Salgado Ramírez, "Santiago Lachiguiri: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria."

⁶⁶⁶ Interview with Rolando Benioio Morales, Octubre 28, 2016, Santiago Lachiguiri. File with author.

⁶⁶⁷ This part is based on the interviews with community's members, I realized during my fieldwork in Santiago Lachiguiri in October 2016.

⁶⁶⁸ Interviews with: Bulmaro Gonzalez; Flayrian; Leonicio Villa Nueva, October 27, 2016, Santiago Lachiguiri. File with author.

indigenous cultivation techniques are adapted to the forest vegetation, which guarantees the diversification of production.⁶⁶⁹

Moreover, as the *comuneros* (members of the community) point out, some of the activities were not economically sustainable such as the battling the water, due to the high costs compared to that of the market.⁶⁷⁰ In addition, the injection of these funds in the community led to divisions and misappropriation of funds by some members and outsiders.⁶⁷¹ As Delfino Mendoza illustrates, the money brought high level of conflict and separation in the community; paradoxically, the community had previously conserved the forest without receiving any kind of compensation.⁶⁷² Furthermore, as Erman Eduardo Lopez Garcia argues, these programs destroyed subsistence agriculture while creating dependency of the community on external resources.⁶⁷³

Finally, CONOFAR proposed to the Santiago Lachiguiri General Assembly the inclusion of a specific area of the forest, *Cerro de las Flores*, into the Mexican system of Protected Areas (PAs)⁶⁷⁴ as voluntarily protected area (VPA). As many interviewees reported,⁶⁷⁵ federal personnel conditioned the indigenous community's access to economic benefits and programs upon the certification. As Bulmaro Gonzalez says: "Nos la pusieron bonita que había beneficios, dinero para la gente, el proyecto de ecoturismo que va a dar dinero...."⁶⁷⁶ Consequently, persuaded by the economic incentives, on August 15, 2003 the General Assembly approved the certification for 5 years. Federal representatives did not clearly explain all of the legal ramifications of the certification. Furthermore, due to the manipulation of the original minutes of the

⁶⁶⁹ Interview Bulmaro Gonzalez, October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁷⁰ Interview with Costantino Galvan Toledo; Eutiquio Enríquez Escobar, October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁷¹ Interview with Delfino Mendoza; Eutiquio Enriquez Escobar October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁷² Interview with Delfino Mendoza, October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁷³ Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

⁶⁷⁴ Oaxaca being the most biodiverse state in Mexico became a hot spot of attention to reach the CONANP's targets on PAs. For instance in 2007-2012 the CONANP's target for the system of protected areas: federal: terrestrial ecosystem 10% of Mexican territory and maritime ecosystem 2.5%; state level terrestrial ecosystem 2.5% of Mexican territory and municipal level 0.5%.

http://www.conanp.gob.mx/quienes_somos/pdf/programa_07012.pdf

⁶⁷⁵ Interview with: Bulmaro Gonzalez, October 26, 2016, Santiago Lachiguiri. File with author.

⁶⁷⁶ "They put things nicely and said we would benefit from the ecotourism project that would generate money for the people..." (My translation). Interview with Bulmaro Gonzalez, October 27, 2016. File with author.

Assembly's deliberation, a permanent, rather than temporary, certification was filed with CONANP.

From a legal point of view, the certification represents a limitation of community control over the area, bringing it under the federal system of PAs. In fact, as established in Article 55bis of the LGEEPA, upon certification the area becomes a “productive area devoted to functions of public interest,”⁶⁷⁷ regulated under the legal framework governing federal PAs. Furthermore, upon certification, the OT, as well as the *plan de manejo* become binding for the community. The OT was developed and the *plan de manejo* was adopted by CONAFOR without consultation with the community. Consequently, these two documents mirrored the dominant Mexican approach to conservation, based on a biodiversity paradigm.

For instance, in the OT, the area of the *Cerro de las Flores* was demarcated without taking into account itinerant agriculture. In addition, the *plan de manejo* prohibited any activity in the certificated area, with the exceptions of those established by the LGEEPA – e.g. CO₂ sequestration, bioprospecting of genetic resources, scientific research, environmental education and ecotourism.⁶⁷⁸ As a farmer reports: “se limitó el uso y disfrute de nuestras tierras comunales, pues se dijo, se destinaban para acciones de preservación de los ecosistemas y su biodiversidad, así como de educación ambiental y ecoturismo.”⁶⁷⁹

Finally, the Mexican government's conservation policy was revealed to be incompatible with the community's way of life in 2007, when 120 farmers who practiced itinerant agriculture were prohibited from cultivating land included within the perimeter area of the certification. When the farmers applied for permits from federal agencies to cultivate their land, their applications were denied because these areas fell within the conservation zone.⁶⁸⁰ Therefore, they were prevented from using lands that their

⁶⁷⁷ Art.55 bis, LGEEPA

⁶⁷⁸ Art. 45, LGEEPA and SEMARNAT, Áreas destinadas voluntariamente a la conservación, http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D3_R_BIODIV04_09&IBIC_user=dgeia_mce&IBIC_pass=dgeia_mce.

⁶⁷⁹ “the use and enjoyment of our communal lands was limited, because it was said that they were to be used for ecosystem and biodiversity preservation, as well as environmental education and ecotourism.” (My translation). In IV, Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 “Zona de Preservación Cerro de las Flores”, Junio 2011.

⁶⁸⁰ VII, Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 “Zona de Preservación Cerro de las Flores”, Junio 2011.

ancestors had cultivated for centuries. As Gonzalez argues,: “Como es posible que nos prohíban trabajar nuestro propio suelo, si nosotros de esto estamos viviendo, de allí vine el maíz, el frijol ..., de ello estamos viviendo, viene nuestro ingreso.”⁶⁸¹ The same issue also occurred in the area devoted to the PES, in which itinerant agriculture was prohibited.⁶⁸²

The next section will illustrate how the biocultural diversity discourse penetrates into the ‘vernacular of the community process of resistance’.

7.5 Community Re-appropriation of its Territory Through Biocultural Diversity Discourse

The Mexican government’s conservation policy formerly embraced a discourse that characterized indigenous traditional agriculture as harmful to the environment and promoted actions and programs to eliminate it. Furthermore, this environmental policy did not recognize the community’s holistic approach to its territory or the centrality of corn production. After *roza tumba y quema* was prohibited in certificated areas, the affected farmers had to find a counter narrative to convince the General Assembly of the relevance of this practice for the community and to resist the dominant discourse.

A counter narrative on itinerant agriculture and its role in conservation has been central in the battle of the community to re-appropriate its territory, way of life and identity. This was made possible by the intervention of an NGO, Cenami, which assisted the community in articulating a counter narrative based on the relationship between *roza tumba y quema* and the conservation of biological diversity

In 2007, the affected farmers, who were mobilized by USACI had the opportunity to participate in meetings organized by local NGOs. During these meetings, they learned about the backlashes of the federal environmental policy and how this policy could lead to violation of indigenous rights over lands and resources. With this information the

⁶⁸¹ “How is it possible that they forbid us to farm our lands if this is what we live of? That is where the corn and beans come from...this is our livelihood, which is where our income comes from.” (My translation). Interview with Bulmaro Gonzalez, October 26, 2016, Santiago Lachiguiri. File with author.

⁶⁸² Ibid.

farmers organized themselves in a committee to bring their complaints before the General Assembly and find a community solution. During these meetings, they got in touch with Cenami, which offered them technical assistance.⁶⁸³

On January 16, 2009 the farmers brought their complain before the Santiago Lachiguirí's General Assembly. They explained how the environmental policy was prejudicing the agricultural activates, and hurting the subsistence of their families and stressed the danger to community autonomy posed by limitation of their rights to practice traditional agriculture. In response, the General Assembly authorized to consult Cenami to have with a view toward obtaining a comprehensive picture of the impact that environmental policy was having on the community and exploring legal remedies to withdraw the certification of areas in which traditional agricultural methods had been prohibited.

Cenami worked with the community to recover the meaning that itinerant agriculture had for it and for the conservation of the forest.⁶⁸⁴ Embracing a holistic approach, Cenami, along with a groups of appointed *comuneros* -in particular those practicing the *roza tumba y quema*- conducted a mapping exercise in which they recalled the traditional use of the lands and provided a picture of the areas that reflected the way farmers have cultivated their lands for centuries. Based on traditional knowledge, the farmers located the *acahuales* areas- areas devoted to agriculture in the forest- from the forest area that they had conserved for centuries.⁶⁸⁵ Furthermore, the NGO organized workshops with the farmers to analyze information and knowledge on the traditional agricultural system in order to present them to the General Assembly.

At the end of this work, the NGO produced an anthropological and ecological report that showed the relevance of itinerant agriculture to the economic independence and identity of the community, the preservation of biodiversity and the conservation of the forest. In this report, Cenami conceptualized the ancestral practice showing its functionality in maintaing the forest for centuries, and the existence of a specific knowledge on the management of the fire and the soil. In other words, Cenami offered a new counter-narrative on the role of traditional agriculture. This narrative was grounded

⁶⁸³ Interview with Rolando Benioio Morales, October 28, 2016, Santiago Lachiguirí. File with author.

⁶⁸⁴ Álvaro Salgado Ramírez, "Santiago Lachiguirí: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria," 2014.

⁶⁸⁵ Ibid.

in a biocultural diversity paradigm on conservation, which conceives the ecosystem as the product of a complex relationship between nature and human activities. Cenami's report was pivotal in persuading the General Assembly that it was capable of deconstructing the dominant approach to conservation re-instating ancestral agriculture as the basis of the identity of the community.

On May 8, 2009 the General Assembly recognized the threat to the community posed by the Mexican government's conservation policy in the form of:

- a) limitations on the use over communal lands;
- b) negative impacts on the traditional agricultural system that is part of the community's identity and that guarantees its subsistence;
- c) misrecognition of the role that the community has played for centuries in conserving the forest and creating biodiversity.

Based on the aforementioned elements, the General Assembly decided to withdraw the certification and to adopt a new *estatuto communal*. The new *estatuto* should have stressed the community's approach in conserving the forest and the importance of the traditional agriculture for its identity.

Thus, the community's work with the NGO was important to its acquisition of new tools to combat the dominant narrative and eventually, to re-appropriate its territory and identity. As one resident of Santiago Lachiguiri reported, the environmental agencies told them that they did not know how to cultivate their lands; for this reason the farmers decided to conduct the anthropological study.⁶⁸⁶ As some interviewees stress, it was a study on the relationship among the human beings, the nature, and the lands.⁶⁸⁷ As the farmers explain, they also worked on a technical analysis because the government told them that they were unable to work.⁶⁸⁸ As the farmers point out, after that, they had to amend the *estatuto* to keep the government out of their land, while stressing their responsibility in conserving the nature.⁶⁸⁹

As Delfino Mendoza argue, the work with Cenami opened the community's eyes. As Mendoza explains, the study showed the community how their ancestors had worked

⁶⁸⁶ Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

⁶⁸⁷ Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

⁶⁸⁸ Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

⁶⁸⁹ Interview with Erman Eduardo Lopez Garcia, October 28, 2016, Santiago Lachiguiri. File with author.

the lands, so they could come back to work in this way.⁶⁹⁰ The minutes of the Assembly state that the farmers:

informan a los asambleístas que estos estudios determinaron que de ninguna manera su forma de trabajo afecta el medio ambiente ni el “Cerro de las Flores” sino que, son totalmente compatibles con su conservación. Situación que a la vista de todos se puede constatar puesto que desde hace muchos años e incluso siglos, se ha preservado el “Cerro de las Flores” en las condiciones en que actualmente se encuentra, bien cuidado y conservado, de esta forma, si la forma de trabajar la tierra que han venido practicando desde hace muchos años fuera dañino para el medio ambiente, hoy día el “Cerro de las Flores” estuviera totalmente destruido, situación que no ha pasado.⁶⁹¹

Another important factor in the reappropriation of the community’s identity was its participation in international meetings. In 2010, with the support of some NGOs, affected farmers had the opportunity to participate in two international meetings.⁶⁹² As the participants reported, the meetings enabled them to share their experience with other Latin American communities that had been adversely affected by national conservation policies.⁶⁹³ Furthermore, during the meetings they learned about the international indigenous human rights system and the relevance of indigenous ways of life to conservation. Those that participated in the international meeting shared their experience with the all community. After these meetings, the community understood the official

⁶⁹⁰ Interview with Delfino Mendoza, October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁹¹ “The assembly members were informed of studies that determined that their way of farming does not affect the environment or the *Cerro de las Flores*, and that such methods are fully compatible with its conservation. A situation that everyone can verify, since for many years, even centuries, the *Cerro de las Flores* has been preserved in its current condition: well maintained and conserved. If it were true that the farming methods they have been practicing for many years were harmful to the environment, today the *Cerro de las Flores* would be completely destroyed, which has not occurred.” (My translation). XIV b), Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 “Zona de Preservación Cerro de las Flores”, Junio 2011.

⁶⁹² “Alternative Forum for Life and Environmental and Social Justice,” the Cancun Climate Change Conference in December 2010; a second meeting in Costa Rica in 2010.

⁶⁹³ Interview with Delfino Mendoza, October 27, 2016, Santiago Lachiguiri. File with author.

conservation policy better, and a greater appreciation of the community's long tradition of stewardship of the forest based on *uso y costumbre*.⁶⁹⁴

As one farmer concluded, the certification helped the community to escape a lethargy that jeopardized the indigenous identity and system of knowledge in the face of the dominant discourse on conservation.⁶⁹⁵ The next section will offer a legal analysis of the impact of the federal conservation policy on the community's enjoyment of collective rights and the legal strategy adopted by the community to redress this violation. In particular, it will show how the biocultural diversity discourse penetrated into the indigenous legal struggle to protect the ancestral territory.

7.6 Santiago Lachiguiri's Incorporation of the Idea of Conservation in Legal Instruments as a Way of Re-appropriating the Community's Territory

Mexican federal conservation policy has created new sites of legal struggles. As illustrated above, environmental policy is mostly implemented through secondary legal acts such as the OT, the certification of voluntary protected areas and the *plan de manejo*. These secondary legal norms can impair enjoyment of indigenous collective rights as recognized in the Constitution. This occurs because the secondary legal acts incorporate a certain conception of the objects of conservation and ideas of territory and resources that tends to misrepresent the indigenous way of life and relationship with nature.

For instance, the official policy does not recognize the relevance that corn, the traditional agricultural system, and the forest have for the community's identity, economy, and way of life. As a result, conservation policy imposes new meanings and uses on indigenous territory. These representations and uses of the territory *de facto* adversely affect the enjoyment of the indigenous right to self-determination by limiting the community's access to and use of their resources, jeopardizing the community's food self-subsistence; promoting the substitution of the community's system of knowledge

⁶⁹⁴ Interview with Eutiquio Enriquez Escobar, October 27, 2016, Santiago Lachiguiri. File with author.

⁶⁹⁵ "La certificación sirvió a la comunidad para salir de su letargo." Interview with: Leoncio Villa Nueva, Santiago Lachiguiri, October 27, 2016.

with a modern model of agriculture and management of the forest, and excluding the community's holistic view on conservation.

Relying on a cognitive injustice approach (Chapter 2), the assessment of the effective enjoyment of the right to self-determination and collective rights over lands and resources requires us to take into account indigenous epistemologies in defining objects of juridical protection. Under this framework, conservation policies based on a biodiversity discourse can limit the enjoyment of existing indigenous collective rights by imposing meanings and uses of the territory that are at odds with that of the community. In this context, a new conservation discourse that recognizes the relevance of the culture and the way the community lives in its territory in defining the objects of conservation, can have an emancipatory potential for the community itself. In other words, this discourse can be used as a means of protecting the community's cosmovision, its control of its territory, and relationship with nature.

In the case of Santiago Lachiguiri, in order to re-affirm its right to self-determination, the community sought to reverse the environmental agency's certification of the voluntarily protected area and amendment of the *estatuto comunal*. In both cases, the legal strategy was grounded in a biocultural diversity discourse. In fact, the re-appropriation of the indigenous territory occurred through the reaffirmation of the value of itinerant agriculture, the role of the community in caring for the forest and the recognition of the cultural meaning of corn.

This discourse is reflected in the legal defense of the community. The General Assembly asked for the assistance of an indigenous human rights NGO, the *Ser Mixe*. During the CONAFOR proceeding to withdraw the certification, the community stressed that the conservation policy imposed foreign meanings on its territory. Furthermore, it stressed how the government's conservation policy had jeopardized the community's traditional epistemological system, and thereby forced it into technological dependency. The petition that the community presented before the CONAFOR reads, in relevant part, as follows:

En consecuencia, quedaron determinadas nuevas actividades agropecuarias que no parten de conocimientos propios y que generan dependencia tecnológica y

restricciones agroalimentarias para todos los que integramos nuestra comunidad. La metodología empleada fueron ajenas a nuestras prácticas para identificar los problemas y sobre todo, para lograr el consenso.⁶⁹⁶

Futhermore, the petition stresses how the community's holistic relationship with nature has fostered conservation of biodiversity: "[...] muchos aspectos de la vida vegetal y animal, así como se pueden observar actualmente, solamente se pueden explicar por el sentido que los comuneros le han dado secularmente a la tierra."⁶⁹⁷ Then the petition emphasizes the intrinsic tie between nature and culture; "[e]l trabajo fortalece la vida, la lengua y la cultura zapoteca. El ser comunitario y el ser de la tierra están esencial e intrínsecamente relacionados, según el modelo mental y cultural que los campesinos les han dado. Sin los comuneros no existe este tipo de tierra, sin esta tierra no existe este tipo comuneros."⁶⁹⁸

On April 4, 2011 the CONAFOR granted the request of the community to cancel the certification. However, its decision was not based on the inconsistency of conservation policy with the indigenous way of life; instead, it was based on the absence of lawful deliberation of the General Assembly and on the adverse impact of the certification on the food-subsistence of some families.

Biocultural diversity discourse also penetrated into the indigenous legal system. As a legal strategy to combat the official conservation policy, the community decided to amend the *estatuto communal*. Through this process, the community re-appropriated the *estatuto*, as a legal tool to protect the indigenous right to self-determination and other

⁶⁹⁶ "As a result, new agricultural activities were determined that do not stem from our personal knowledge and that generate technological dependence and agri-food restrictions for all of us who are part of our community. The methodology used was alien to the practices we used to identify problems and, above all, to achieve consensus." (My translation). Santiago Lachiguri, Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 "Zona de Preservación Cerro de las Flores", Junio 2011.

⁶⁹⁷ "[...] many aspects of plant and animal life, as they can presently be observed, can solely be explained by the secular meaning that the farmers have given their lands." (My translation). Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 "Zona de Preservación Cerro de las Flores", June 2011.

⁶⁹⁸ "Working our lands strengthens our lives, language and the Zapotec culture. The communal being and the being of the earth are essential and inherently related, according to the mental and cultural model that the farmers have given them. Without the farmers, there is no such land, and without this land, there are no such farmers." (My translation). Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 "Zona de Preservación Cerro de las Flores", June 2011.

collective rights. Before this moment, the *estatuto* was a legal act to regulate the use of communal lands according to the agrarian law. In fact, the community adopted the previous *estatuto* with the assistance of the personnel of the RAN, (National Agrarian Register); therefore, this document did not reflect the specificity of the community, on the contrary, it was a high-standardized document promoted by the RAN.

The new *estatuto* was adopted after three days of discussion in the General Assembly, where the participants analyzed each article. Eventually, on January 8, 2010, it was adopted. Currently, the Santiago Lachiguiri inhabitants consider the *estatuto*, as a fundamental legal document, adopted according to their legal system and reflecting their *use y costumbre*. As some *comuneros* point out, the *estatuto* is fundamental to ‘conserve the community’; it is a way to defend themselves as a people,⁶⁹⁹ and to allow future generations to acknowledge the ancestral culture of Santiago Lachiguiri.⁷⁰⁰

In the *estatuto*, the community stresses the centrality that the interrelation with the nature has for its indigenous and agrarian identity. Article 8 of the *estatuto* reads: “Be an agrarian and indigenous community concerns: VI. The spiritual relationship between human beings and the earth; VII The communitarian conservation (cuidado) and use of the earth and the natural resources.”⁷⁰¹ Furthermore, the *estatuto* recognized the importance of itinerant agriculture as a way to guarantee the equilibrium between food production and conservation of the forest. The *estatuto* regulates the exercise of the *roza tumba y quema* according to the customary law and recognizes its importance for the existence of the community. In this matter, the *estatuto* establishes the obligation of the *comuneros* “to transmit the knowledge of the *acahuales* system (*roza tumba y quema*) to youths and children”⁷⁰²

Moreover, the new *estatuto* introduces a new legal category of territory that is not contained in Mexican Law, “ancestrally conserved land” (Section IV “tierras

⁶⁹⁹ Interview with Genico Ramirez Bencio, October 28, 2016, Santiago Lachiguiri. File with author.

⁷⁰⁰ Interview with Lionicio Villa Nueva, Santiago Lachiguiri, October 27, 2016.

⁷⁰¹ “La condición de comunidad agraria y comunidad indígena, implica: VI. La relación espiritual entre los seres humanos y la tierra; VII. El cuidado y aprovechamiento comunitario de las tierras y los recursos naturales...”. Art. 8, Estatuto Comunal Santiago Lachiguiri, January, 8 2010.

⁷⁰² “Los acahuales son un sistema de agricultura tradicional milenario que mantiene el equilibrio entre la producción de alimentos y el cuidado de la montaña, bosque y selva. Para hacer buen uso del acahual, se observarán las siguientes disposiciones: XIII Es obligación de todos los comuneros transferir los conocimientos en el cultivo de los acahuales a los jóvenes y a los niños.” Art. 59, Estatuto Comunal Santiago Lachiguiri, January 8 2010.

ancestramente conservadas”), which includes not only the *cerro de la flores*, but also other parts of the forest, as ancestrally conserved lands. According to the minutes of the General Assembly, this section of the *estatuto* was included to regulate the conservation of the *cerro de la flores* “[...] como se ha hecho desde hace muchos años hasta ahora”;⁷⁰³ in other words, to regulate it based on the community way of life in the territory and its customary norms. The *estatuto* declares that conservation of the ancestrally conserved lands occurs according to “the customs and practices that were inherited from our ancestors, which we will pass on to future generations.”⁷⁰⁴ Furthermore, the *estatuto* provides that in using ancestrally conserved land the community shall: “Not engage in activities involving agriculture, raising livestock, forestry, or eco-tourism, or the extraction by people from outside the community of plant genetic resources and related information, or any other activity incompatible with the community's interests.”⁷⁰⁵ The *estatuto* also stresses that knowledge pertaining to lands and resources belongs to the Santiago Lachiguiri people, and is part of the community's intangible heritage.⁷⁰⁶

Finally, Section VI titled *De la Agricultura, las Semillas Nativas y Biodiversidad de la Comunidad* (Agriculture, Native Seeds and Biodiversity of the community) offers some insights on the Santiago Lachiguiri's approach to its territory. Specifically, this section recognizes the importance of the corn for the identity of the community. As the *estatuto comunal* says:

The community bases its existence on the cultivation and consumption of corn, as it has since time immemorial. Recognizing it as an essential element of our identity and as a legacy of our corn-cultivating ancestors, we have thus established a community centered on its origin and a diversity that is constantly evolving and adapting. We recognize that corn strengthens our society and our

⁷⁰³ “[...] as it has been done for many years till now.” (My translation). Acta de Asamblea General de Comuneros, May, 28 2010, para. (d).

⁷⁰⁴ Original text: “las normas y prácticas heredadas de los antepasados, transmitiendo estas costumbres a las futuras generaciones hijos.”; (My translation). Art. 76, Estatuto Comunal Santiago Lachiguiri, January, 8 2010.

⁷⁰⁵ Original text: “No realizar actividades agrícolas, pecuarias, forestales y eco-turísticas, así como de extracción por parte de personas ajenas a la comunidad de recursos fitogenéticos y de información relacionada, o cualquier otra que sea incompatible al interés de la comunidad.” (My translation). Art. 76, Estatuto Comunal Santiago Lachiguiri, January 8 2010.

⁷⁰⁶ “La riqueza, conocimientos y sabiduría del pueblo de la Comunidad de Santiago Lachiguiri respecto de sus tierras y recursos naturales son de su propiedad como patrimonio inmaterial y en complemento a su patrimonio material.” Art. 77, Estatuto Comunal Santiago Lachiguiri, January 8 2010.

sense of sharing. Corn distributes joy and is present through our struggles, thus, maintaining the spirit and the culture of our people.⁷⁰⁷

Finally, the community declares its territory free from the GMOs to protect its seeds⁷⁰⁸ and Article 85 of the *estatuto* obliges all the *comuneros* to preserve the native seeds and the biodiversity.

As I illustrated, the relationship between nature and culture played a central role in the struggle of Santiago Lachiguiri against the dominant conservation policy that wants to ‘modernize’ them. If the mainstream discourse in conservation adversely impacted the community’s epistemology, the biocultural diversity discourse offered a counter narrative, recognizing the paramount role of indigenous epistemology in shaping the current landscapes and in caring for the environment. In other words, biocultural diversity discourse rescues indigenous epistemologies from the backwardness stage in which modernity had relegated them. This new discourse in conservation conceives indigenous epistemologies as alternative and peer systems of knowledge that need to have equal opportunity in the definition of the objects of conservation and policies.

Concerning the legal field, from the case study emerges that both, the relationship of the community with some natural constituencies -e.g. corn- and the indigenous epistemology -expressed in a certain way to relate to nature, e.g., the ancestral system of cultivation- reached the frontline of the indigenous legal struggle to affirm the right to self-determination. In fact, the recognition of the indigenous epistemology/ontology, expression of a certain way to relate with nature and give meanings to natural elements, is a pre-condition to exercise the right to self-determination. As illustrated in Chapter 1, indigenous legal scholars have developed the idea of cultural sovereignty as a pre-condition to achieve an effective enjoyment of the rights to self-determination and other

⁷⁰⁷ Original text: “La comunidad funda su existencia en el cultivo y consumo del maíz, como ha sido desde tiempo inmemorial, reconociéndolo junto con las plantas relacionadas con este cultivo como un elemento esencial de la comunidad y como herencia de sus antepasados -quienes crearon al maíz- constituyendo así una comunidad centro de origen y diversidad en permanente evolución y adaptación. Reconocemos que el maíz fortalece nuestra organización social, los sentidos del compartir, distribuir, disfrutar, anima al tequio, sustenta la fiesta y a la cultura de nuestro pueblo.” Art. 82 Estatuto Comunal Santiago Lachiguiri, January 8 2010.

⁷⁰⁸ Arts 83-86 Estatuto Comunal Santiago Lachiguiri, January 8, 2010.

collective rights.⁷⁰⁹ In this context, sovereignty means re-appropriation of the meanings and symbols that the mainstream society has delegitimized and misrepresented. It also means, re-appropriate the use of the land and resources according to the community's cosmovision, and way of life.

In the case of Santiago Lachiguiri, the re-appropriation of the meanings and symbols that the mainstream society had delegitimized and misrepresented, occurred through a process of vernacularization into the indigenous legal system of the biocultural diversity discourse. This process of vernacularization occurred by adopting in the *estatuto* several norms that deal with fundamental relationship of the community with nature. For instance, those norms that expressly tie the indigenous community with the production and use of the *maiz* or that recognize the relevance of the indigenous system of knowledge for conservation. Furthermore, the community created new institutions to cope with the ecological crisis according to its epistemology and customary system, such as the ancestrally conserved lands.

Section 7.7 will further navigate the topic of the hybridization of the legal by indigenous epistemologies/ontologies. Through some examples collected during my fieldwork, I will illustrate how the relationship between human beings and nature is brought into the legal struggles and how some environmental instruments can become emancipatory tools to enhance the right to self-determination.

7.7 Hybridization of the Legal Field: Some Insights from the Ground

As I illustrated in Chapter 1, decolonial scholarship argues that, in order to achieve an effective participation of indigenous peoples within a multicultural state, a process of decolonization of the legal field is needed.⁷¹⁰ In this matter, some authors have proposed to analyze the process of hybridization of the legal field, looking at how

⁷⁰⁹ Among other see: Coffey and Tsosie, "Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations"; Tsosie, "Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought"; Deloria and Clifford, *The Nations within: The Past and Future of American Indian Sovereignty*; Krakoff, "A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation"; Warrior, "Intellectual Sovereignty and The Struggle for An American Indian Future. Chapter 3 of Tribal Secrets"; Anaya, *Indigenous Peoples in International Law*.

⁷¹⁰ Sousa Santos, "Epistemologies of the South and the Future."

different epistemologies are brought into the legal field.⁷¹¹ To navigate this topic, these authors have elaborated the category of relational ontologies, which are those ontologies that differ from the canons of Western modernity based on some elements that include:⁷¹² a) the Cartesian, mechanistic separation of culture and nature (human being can dominate the nature) versus a more holistic relationship with it; b) individual as social units versus a prominent role of the collectivity as in the case of the *comunalidad*;⁷¹³ and b) economy as independent from social practices versus an idea of an economy based on reciprocity and social sharing.

As indigenous legal scholars have argued, the recognition in the public sphere of different ways to relate with nature is a pre-condition to exercise the indigenous rights to self-determination. In fact, the way indigenous communities give meanings to non-human consistencies as well as, interact with the natural world, are expressions of their cultural sovereignty.

As I showed in Chapters 4 and 5, these different epistemologies have not been satisfactorily addressed in the Mexican Constitution and Mexican legal system. Before this lack of recognition by the Mexican State, the case-study of Santiago Lachiguiri shows that indigenous communities can address this topic relying on their legal system, particularly the *estatuto comunal*. The latter can be used to regulate and introduce some legal instruments to protect the indigenous distinct relationship with nature. For instance, in the case of Santiago Lachiguiri's *estatuto*, some norms deal with the recovery and transmission to future generation of indigenous knowledge over nature, and other norms recognize the role that the cultivation of *maíz* and the agricultural practice of the *roza tumba y quema* have for the community's identity.

The case of Santiago Lachiguiri shows that the struggle over the corn becomes a struggle over indigenous's identity, way of life and cosmovision; in other words, a struggle to survive as a distinct people. As in the case of Santiago Lachiguiri other

⁷¹¹ Mario Blaser, "Notes towards a Political Ontology of 'Environmental' Conflicts," *Contested Ecologies: Dialogues in the South on Nature and Knowledge*, 2013; De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*; Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?"

⁷¹² Blaser, "Notes towards a Political Ontology of 'Environmental' Conflicts"; De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*; Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?"

⁷¹³ See the idea of *comunalidad* presented in Chapter 4. According to this philosophy, each human being exists in relation to each others. See: Luna Martínez, *Eso Que Llamam Comunalidad*.

indigenous communities have used their legal systems to stress the fundamental role of *maiz*, qualifying the community as a center of origin of the corn and regulating its duty of caring for the diversification of this seed.⁷¹⁴ In these cases, the protection of the corn bears a request for recognizing different epistemologies, economic systems, ideas of society, in other words, a way to exercise the community's cultural sovereignty and self-determination.

Other cases show that non-human consistencies are brought at the frontline of the legal battle of indigenous peoples to affirm their right to self-determination and other collective rights. In the case of the indigenous community of Puerto Antonio,⁷¹⁵ the need to protect Mother Earth emerges in the official declaration of the Agrarian General Assembly in which the community legally bans any kind of mining development in its territory. The point 7 of the declaration says:

Esta asamblea reafirma su amor hacia la tierra, la que considera como madre y sustento de vida, por lo tanto se compromete a defenderla, ante cualquier actividad (invasión, despojo, expropiación) que ante contra su integridad.⁷¹⁶

The same language is used in the declaration of the municipality of San Puerto del Mar⁷¹⁷ that declares the territory of an indigenous community free from mining projects.⁷¹⁸ In the case of the indigenous community of Magdalena Teitipac, the *estatuto comunal* describes the relationship with the Earth as a core institution of the community. Particularly, it stresses that community considers the Earth as Mother and not as object to be exploited.⁷¹⁹

⁷¹⁴ Among others see: Art 80-82, Estatuto Comunal, Santiago Teotlaxco.

⁷¹⁵ Puerto Antonio is not the real name of the indigenous community. I substituted it after the request of the community's lawyers to conceal the real name to prevent any negative impact on the legal strategy they are carrying on.

⁷¹⁶ "This Assembly re-affirms its love for the earth that considers as a mother and substance of life; therefore, the Assembly stands for its defence against any activities (invasion, dispossession, expropriation) that can jeopardize its integrity". (My translation). Puerto Antonio, Acta de Asamblea, July 10, 2015.

⁷¹⁷ San Puerto del Mar is not the real name of the indigenous community. I substituted it after the request of the community's lawyers to conceal the real name to prevent any negative impact on the legal strategy they are carrying on.

⁷¹⁸ Ayuntamiento Constitucional San Puerto del Mar, *Acta de Sesión Solemne de Cabildo Municipal-Territorio Prohibido para la Minería*, 2015.

⁷¹⁹ Art 4.I, Estatuto Comunal, Magdalena Teitipac Magdalena.

From the analysis of the *estatutos comunales* that I collected during my fieldwork, emerges that some communities regulates institutions that deal with the spiritual relationship of the community with earth and resources.⁷²⁰ For example, the community of Magdalena Teitipac has created the *Comité por la Defencia de la Integridad Territorial y Cultural* (Committee for the Defence of the Territorial and Cultural Integrity) whose functions include: strengthening the defence of the territory and building an integrated defence of the culture; guaranteeing the direct participation of the community's members in the design, implementation and monitoring of projects in the indigenous territory; implementing educational projects to recover the indigenous language and cultural heritage.⁷²¹ In the case of Santa María Xadanai, the *Comité de Vigilancia de los Recursos Naturales* (Committee of Control over Natural Resources) monitors over the use of the land according to the indigenous customary legal system.⁷²²

The case of Santiago Lachiguiri also shows that the indigenous community crated the *tierras ancestramete conservadas* (ancestrally conserved lands or community-protected areas)⁷²³ to oppose the official system of protected areas (PAs). Through this institution, the community vernacularizes into its legal system the conservation discourse, while respecting its epistemologies and self-determination. The community-protected areas are regulated under the indigenous legal systems, but they do not have a legal status under the Mexican legal system.

The analysis of several *estatutos comunales*⁷²⁴ and of the interviews⁷²⁵ that I conducted during my fieldwork, show that several indigenous communities in Oaxaca, regulate the indigenous-protected areas in their *estatutos comunales*,⁷²⁶ as an alternative to the Mexican conservation policy of the PAs. The first well-documented community-protected area in Oaxaca, it is the *Reserva Ecológica Campesina* of Chimalapas. In 1996,

⁷²⁰ Estatuto Comunal, Santiago Teotlaxco.

⁷²¹ Arts 38-40, Estatuto Comunal, Magdalena Teitipac Magdalena.

⁷²² Art. 106, Estatuto Comunal, Santa María Xadanai.

⁷²³ The indigenous legal documents refer to this institution using different names. Here, I will use the term community-protected areas as a general term to describe the lands that the community devotes to conservation and that are regulated under its legal system.

⁷²⁴ For the full list, see the bibliography.

⁷²⁵ For the full list, see annex I.

⁷²⁶ In this matter see also: Gary J. Martin et al., "Indigenous and Community Conserved Areas in Oaxaca, Mexico," *Management of Environmental Quality: An International Journal*, 2011; Salvador Bray B, David , Duran, Elvira, Anta and Mondragón Fernando .Martin, J Gary, "A New Conservation and Development Frontier: Community Protected Areas in Oaxaca Mexico," *Current Conservation*, no. 2 (2008): 7-9.

the indigenous communities of Chimalapas created this area to oppose the implementation of the official system of PAs in their territories. As Miguel Ángel García Aguirre, the *Reserva Ecológica Campesina* became a form of ‘ecological resistance’ through which, the indigenous communities promoted a social alternative model of conservation and sustainable development.⁷²⁷

The *Reserva Ecológica Campesina* became a tool to strengthen indigenous self-determination by implementing the following actions: promoting the food-sovereignty and the diversification of production according to indigenous system of knowledge; using and managing the forest based on the customary legal system (*estatuto comunal* and OT); recovering of the indigenous knowledge and technologies; and favoring a dialogue of knowledge with environmental NGOs and scientists on the process of conservation.⁷²⁸ The community-protected area become an alternative to the biodiversity model of conservation that commodifies, natural resources and disenfranchises indigenous epistemologies. In fact, in the case of Chimalapas, the promotion of an alternative model of conservation based on the communities’ cosmovion and on the recovery of indigenous knowledge is a manifestation of indigenous cultural sovereignty and exercise of the right to self-determination.

As Aguilar explains, other indigenous communities in Oaxaca are in the process of regulating this kind of areas as an alternative to the dominant model and as a tool to strengthen their collective rights.⁷²⁹ In the case of Capulalpam de Méndez, the community’s official declaration that institutes the community-protected area states that the creation of this area is a form of legal defense against the development of large-scale projects, such as mining activities.⁷³⁰

Finally, the case of Santiago Lachiguiri offers another important insight on the hybridization of the legal field to accommodate other ontologies/epistemologies. This concerns the role of environmental legal instruments- such as the OT and the *plan de manejo*- in limiting the indigenous self-determination and the enjoyment of other

⁷²⁷ Miguel Ángel García Aguirre, *Chimalapas: La Defensa Del Territorio Y de Los Bienes Naturales Como Un Factor de Identidad Indígena* (Ceccam, Brot für die Welt, 2015); Miguel Angel García, “La Reserva Ecológica Campesina de Los Chimalapas,” 1997.

⁷²⁸ García Aguirre, *Chimalapas: La Defensa Del Territorio Y de Los Bienes Naturales Como Un Factor de Identidad Indígena*; García, “La Reserva Ecológica Campesina de Los Chimalapas.”

⁷²⁹ Interview with Aguilar Hugo, September 13, 2016, City of Oaxaca. File with author.

⁷³⁰ Capulalpam de Méndez, *Declaratoria Si a la Vida, No a la Minería*, November 22, 2014.

collective rights by imposing certain uses and meanings over the indigenous territory and resources. As a consequence, secondary legal acts can *de facto* limit the effective enjoyment of collective right as recognized in the Constitution. However, the experience of other communities shows that these environmental legal instruments can be used to enhance collective rights. For instance, in the case of Cuetzalan del Progreso, the Náhuatl indigenous community used the OT to re-appropriate indigenous relationship with nature, and indigenous cosmovision, as a tool to protect its territory against the development of economic projects, eg., tourism and mining.⁷³¹

According to the in Náhuatl culture, nature is conceived as Mother and Father, and the community has a spiritual relationship with it; therefore any act of aggression perpetuates against it, it is a direct aggression to the community.⁷³² Furthermore, Náhuatl people's system of production is strongly connected with nature and guarantee its preservation.⁷³³

The indigenous OT was adopted with a large and direct participation of Náhuatl peoples, through the organization of several meetings in the traditional form of Assembly.⁷³⁴ The indigenous OT mirrors the way Náhuatl people use their lands according to their cosmovision, protects the indigenous way of production with the nature,⁷³⁵ and addresses the economic interests of the inhabitants of the municipality.⁷³⁶ During the process of adoption of the OT, there was also a 'dialogue of knowledge' between indigenous people and scientists for the definition of the objects of conservation.⁷³⁷

The municipality of Cuetzalan del Progreso adopted the indigenous OT that became legally binding under the Mexican legal system; consequently, the community has been able to use it as a legal strategy to fight against large-scale development projects

⁷³¹ Leonardo Durán Olguín, "El Ordenamiento Territorial Ecológico de Cuetzalan, Una Herramienta Para La Defensa Del Territorio Ante Megaproyectos," *La Jornada de Oriente*, June 17, 2014.

⁷³² Colectivo Tajpianij, June 30, 2017, <https://www.youtube.com/watch?v=W3Ci8k0q-Qw>

⁷³³ Gobierno del Estado de Puebla Segretería General de Gobierno, Orden Jurídico Poblano, *Programa de Ordenamiento Ecológico Local del Territorio del Municipio de Cuetzalan del Progreso*, December 3, 2010.

⁷³⁴ "Kenij Omachiuel Moyektalis in Altepet (Ordenamiento Ecológico Territorial Del Municipio de Cuetzalan: Instrumento Pare La Coexistencia SocioambientaIntegral," in *Conferencia Con La Universidad Autónoma de Ciudad Juárez, Febrary 12*, (Ciudad Juárez, Chihuahua, 2011).

⁷³⁵ Ibid.

⁷³⁶ Oranismo oficial del comité de ordenamiento territorial integral de Cuetzalan, "Ordenamiento Territorial Integral Kenij Omachiuel Moyektalis in Altepet," February 2011.

⁷³⁷ Ibid.

promoted by private companies in their territory. Furthermore, around the OT, the community created new institutions to guarantee a direct participation of indigenous members in the management and conservation of their territory;⁷³⁸ therefore, the community strengthened its right to self-government dismantled under the current Mexican development policy.

The above-illustrated cases show a trend in which indigenous peoples bring non-humans consistencies and their epistemologies at the frontline of legal struggles against projects and policies that jeopardize their cultural sovereignty. In response to a Mexican legal system that does not offer legal instruments or effective remedies to implement the right to self-determination as enshrined in the Mexican Constitution and international instruments, indigenous communities rely on their customary legal systems or secondary legal environmental instruments to advance their collective rights against mega-projects and state policies. Finally, through these legal actions, indigenous peoples seek to re-frame the legal system to accommodate their epistemologies and to promote an idea of self-determination that embraces cultural sovereignty.

⁷³⁸ “Kenij Omachiuel Moyektalis in Altepet (Ordenamiento Ecológico Territorial Del Municipio de Cuetzalan: Instrumento Pare La Coexistencia SocioambientaIntegral.”

Chapter 8 Conclusion: Multiculturalism at the Crossroads of Conservation Diversity Discourses

This chapter offers some conclusions and thoughts based on the analysis presented above. This dissertation is situated at the intersection of conservation policy and collective rights in the context of the multicultural state. In this time of ecological crisis, State-sponsored conservation policies increasingly impacting collective rights of indigenous peoples and minority cultural groups. As a consequence, the link between humans and nature and nature and culture is going to occupy an essential space in future academic works.

To navigate the intersection of conservation policy, collective rights and multicultural state, this dissertation is divided into two parts. The first part presents the theoretical frame in which my analysis is situated and then, relying on constructivism, post-structuralism, critical thinking, and Science and Technology Study; it shows the emergence of two discourses that influence conservation policy: biodiversity and biocultural diversity. Ultimately, this part offers some analytical and theoretical tools to navigate the impact of conservation policies on the effective enjoyment of indigenous collective rights, and more broadly to contribute to the debate on accommodation of cultural diversity in multicultural societies in the era of ecological crisis.

Part II further develops the concepts and ideas presented in part I. Part II changes the scale of analysis, looking at the impact of conservation discourses on collective rights based on the practice of indigenous communities in the Mexican State of Oaxaca. Since the early 1990s, given the high presence of biological diversity, this area has become a target of federal conservation policy. The latter has to deal with the presence of the indigenous peoples that have legal titles over about 80 percent of the Oaxacan territory. This scenario is particularly suitable for showing the impact of this policy on indigenous collective rights, namely: a) how the official Mexican conservation policy interacts with indigenous collective rights; b) how indigenous communities use biocultural diversity discourse to re-appropriate their way of life the territory; and c) how conservation discourses are ‘vernacularized’ into indigenous customary legal systems and legal strategies.

This last chapter is divided into four sections: Section 8.1 will offer some conclusions on the impact of conservation policies based on a biodiversity discourse on the enjoyment of indigenous collective rights; Sections 8.2 and 8.3 will present some final remarks on the effects of biocultural diversity discourse on the debate on the accommodation of cultural diversity, focusing on the hybridization of the scientific and legal field; and finally, Section 8.4 will offer some suggestions and insights for future research in the emerging area of inquiry that navigates the interrelation between environment and legal studies in the era of ecological crisis.

8.1 Multiculturalism and Biodiversity Discourse in Mexico

Mexico ranks among the top 17 megadiverse countries that have between 60 and 70 percent of worldwide biodiversity.⁷³⁹ Consequently, Mexico is host to several financial and international programs to cope with the global loss of biodiversity. As the literature documents, biodiversity hotspots for conservation overlap the areas inhabited by indigenous communities.⁷⁴⁰ Given the presence of indigenous communities in ‘reservoirs of natural resources’, the implementation of conservation policy has occurred mostly within the indigenous territory.

As already explained, the implementation of conservation policies needs to be read in the broader context of the colonial past suffered by indigenous peoples and the debate concerning the multicultural state. For this reason, in this work, I used the framework offered by decolonial scholarship to navigate the impact that the conservation policy has on the enjoyment of indigenous collective rights and in challenging the multicultural debate on accommodation of cultural diversity, particularly in terms of the political project to re-imagine the relation between the State and indigenous peoples.

Mainly, I relied on the idea of cognitive injustice as one of the root causes of the violation of indigenous collective rights. This approach looks at the oppression and

⁷³⁹ Mexican Government, *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción*, 2016-2030.

⁷⁴⁰ Boege, “El Patrimonio Biocultural de Los Pueblos Indígenas de Mexico: Hacia La Conservación in Situ de La Biodiversidad Y Agrobiodiversidad En Los Territorios Indígenas”; Abisaí J. García-Mendoza, Ordonez, María de JesúsDíaz, Briones-Salas, *Biodiversidad de Oaxaca*.

injustice suffered by indigenous peoples questioning the privilege of modernity in the production of knowledge. As decolonial authors have pointed out, the perpetuation of modernity as a dominant paradigm frames the relationship between humans and non-humans, the construction of subjectivities, and the idea of development and market, and thus leads to the exclusion of indigenous peoples from the fabric of the multicultural state.⁷⁴¹ Embracing this perspective, and considering the objects of conservation as discourses emerging at the interaction of scientific, political and cultural fields, conservation policies and laws become new terrains of legal and symbolic conflicts, as well as emancipation.

In a cognitive injustice framework, ideas around conservation are not neutral for the debate on multiculturalism. In fact, the debate on conservation opens up the floor for new conceptualizations of the relationship among human beings, markets, and nature. To understand this aspect, I addressed the following topics: how the objects of conservation emerge and who defines them; what are the meanings that conservation policies bear; what are the legal instruments through which these meanings are implemented; and what are the mechanisms through which indigenous epistemologies are excluded or included from the conservation debate. In Chapters 2 and 3, relying on the constructivist and critical approach, I described the emergence of biodiversity and biocultural diversity discourses and revealed the meanings concerning nature, culture, and market that they bear, as well as who defines the objects of conservation.

Biodiversity bears a monocultural approach to conservation; in other words, indigenous epistemology is excluded from the debate that shapes conservation policy. Therefore, this approach to conservation privileges Western modern science to define the objects of conservation. Western scientists speak for the earth;⁷⁴² consequently, they establish the conditions under which other systems of knowledge are permitted to enter into the dialogue. About the meanings that conservation policies bear, biodiversity policy embraces a Western modern construction of nature that is separate from the culture; furthermore, embracing a Western idea of economy, nature is transformed into ecologic capital, whose value is defined by the market.

⁷⁴¹ See: Chapter 1.

⁷⁴² Escobar, *Encountering Development. The Making and Unmaking of the Third World*.

A biodiversity discourse promotes specific constructions of otherness that operate as mechanisms to exclude indigenous epistemologies from the conservation debate. Under a biodiversity paradigm, indigenous epistemology emerges only in the form of TK, which is a reified representation of a broad cultural system. Furthermore, its validity is subordinated to validation under the norms of the positivist sciences and economic utility. In this scenario, expressions of indigenous ways of life are not included as objects of conservation because they conflict with the canons of modernity, pursuant to which nature and culture are separate and nature is commodified. Modern conservation regimes exclude them by labeling them as backward, anti-progressive, and environmentally harmful.

As shown in Chapter 6, this is the case of the official Mexican policy on conservation. In the Mexican conservation strategy, indigenous epistemologies emerge only in the form of TK and just if they can pass the test of positive sciences. The case study of Santiago Lachiguiri shows how this exclusion occurred in the case of the indigenous itinerant agriculture. Because it did not fit the canons of the biodiversity discourse, it was labeled as backward, and environmentally dangerous. This stereotype perpetuates the privilege of the dominant model over indigenous peoples.

Andrew Mathews, in his ethnographic work in Mexico, illustrates that the ban of the traditional agricultural system (*roza tumba y quema*) is based on a construction of the farmers as lacking the ability and knowledge to manage the fire.⁷⁴³ The stereotype of the farmers as ignorant, poor and backward is used to justify the suppression of the indigenous system of knowledge that does not meet the objectives of conservation policy based on biodiversity discourse. Biodiversity policy thus incorporates the privilege of modernity as a system of construction of knowledge and imposition of meanings.

Furthermore, as some commentators argue, under Mexican conservation policy, an indigenous community is entitled to a role in conservation only when it accepts the guidelines imposed by the government's environmental agencies.⁷⁴⁴ The indigenous economy that is based on a traditional agricultural system of cultivation, subsistence

⁷⁴³ Andrew S. Mathews, "Power/knowledge, Power/ignorance: Forest Fires and the State in Mexico," *Human Ecology*, 2005.

⁷⁴⁴ Michael Gabriel Hébert, Martin, Rosen, "Community Forestry and the Paradoxes of Citizenship in Mexico: The Cases of Oaxaca and Guerrero," *Canadian Journal of Latin American and Caribbean Studies*, 2007.

production, and reciprocity does not meet the canon of market economic growth, and therefore needs to be modernized. Speaking about the Mexican environmental policy, Mathews points out that it promotes productivity and the modernization of farms.⁷⁴⁵

To sum up, behind the construction of this stereotype of Indians as poor farmers, there is the perpetuation of the privilege of the dominant model over indigenous peoples. First, the privilege of positive science in defying the objects of conservation emerges in the construction of the traditional agricultural system as backward, and environmentally dangerous, therefore declared unlawful practice. In other words, indigenous epistemology is relegated to be the expression of poverty and ignorance, therefore in need to be modernized. Second, biodiversity policy, embracing an ideal of the ecosystem that separates nature from culture, does not recognize the role of the indigenous agriculture as an expression of a distinctive way of life that for centuries has shaped the landscapes, steward the forest and maintain the biodiversity. Finally, the federal conservation policy bears a specific idea of nature that is conceived as ecological capital. In this context, only specific economic activities are officially promoted and supported. These activities are at odds with the economic model of the community that is based on reciprocity and to certain social and cultural practices (see Sections 6.2.3-6.2.4). These latter are protracted as anti-progress and expression of poverty therefore in need of state intervention.

Looking at biodiversity policy through the lens of cognitive injustice, it violates the rights to self-determination by limiting the cultural sovereignty of the indigenous community. In fact, the lack of recognition of the value of indigenous agriculture and the imposition of a process of modernization jeopardizes indigenous epistemology. For instance, the loss of corn cultivation adversely impacts a complex system of social, economic and cultural relationships, as described in Sections 4.8 and 7.2-3. Moreover, it creates a dependency on an economic model that is alien to some indigenous societies. Furthermore, conservation policy adversely impacts on the enjoyment of rights to land and resources, imposing meanings and uses that are not negotiated and approved by the communities.

⁷⁴⁵ Andrew S Mathews, "Suppressing Fire and Memory: Environmental Degradation and Political Restoration in the Sierra Juarez of Oaxaca, 1887–2001," *Environmental History*, 2003; Mathews, "Power/knowledge, Power/ignorance: Forest Fires and the State in Mexico."

Finally, as described in the case of the current Mexican conservation policy, indigenous epistemologies are excluded from the definition of the objects of conservation and, furthermore, oppressed and marginalized through the narrative of conserving the biodiversity. This exclusion eventually leads to a violation of the right to self-determination by limiting indigenous cultural sovereignty. In fact, the implantation of this policy can lead to the disappearance of practices that are at the core of the indigenous social, cultural, and economic system. Furthermore, this policy does not allow communities to freely express their consent because the community is not part of the political debate to define the objects of conservation. Therefore, the rights to FPIC is violated.

Concerning the multicultural configuration of the state, the exclusion of indigenous epistemologies from the definition of the objects of conservation shows a limit for the incorporation of indigenous communities into the fabric of the state. In fact, as the emerging decolonial literature leads by Blaser, De La Cadena, and Escobar argue, the accommodation of cultural diversity within the multicultural state needs to address the epistemological and ontological issue. Embracing this approach means that the effective enjoyment of collective rights can occur only by recognizing the adverse effects on indigenous epistemologies brought about by the modern model; acknowledging the privilege of modernity in shaping policies, laws and institutions; and re-appropriating meanings and discourses that have been marginalized.

This mean that governments must rethink some of the pillars upon which the liberal multicultural state is based in order to address unique ideas of territoriality, subjectivity, and responsibility towards the Earth- such as the rights of non-human beings and inanimate objects (e.g. mother earth).⁷⁴⁶ Therefore, in order to guarantee indigenous participation into the fabric of the state, indigenous epistemologies need to be taken into account in shaping state institutions, policies, and the legal system.

This concept can be further developed through Blaser's idea of political ontology. As the author explains, political ontology is a project that "meant to simultaneously imply

⁷⁴⁶ Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010; Mario Blaser, "Ontological Conflicts and the Stories of Peoples in Spite of Europe," *Current Anthropology* 54, no. 5 (2013); Arturo Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?," *Cultural Studies* 24, no. 1 (2010): 1-65..

a certain political sensibility, a problem space, and a modality of analysis or critique. The political sensibility can be described as a commitment to the pluriverse...in the face of the impoverishment implied by universalism.”⁷⁴⁷ As Blaser continues, multiculturalism should engage with what is politically possible. As he explains, most of the multicultural literature has limited the political debate to the control over resources; however, a situated analysis of the indigenous practices show that what is at stake is more than resources.⁷⁴⁸ In this regard, different meanings over territory, different ways of reality and interacting with nature, different ideas of society become central concerns.

In this context, multiculturalism, as a political project to redefine the relationship between state and indigenous peoples, needs to engage with the existence of other epistemologies as a possibility to imagine what is legally and politically possible and reveal the privilege of the canon of modernity in shaping the political and legal sphere. This mean conceptualizes the idea of multicultural citizenship and multicultural democracy to include policies and rights that address the recognition of different ways of interrelating with nature, conceive knowledge, society, and economy. In the case of conservation policy, this mean promoting intercultural dialogue in defining the objects of conservation thus democratization of the scientific debate through the direct participation of indigenous communities.

Biocultural diversity discourse offers an alternative to the biodiversity narrative on conservation. The next section will present the emancipatory potential of the biocultural diversity discourse.

8.2 Multiculturalism at the Crossroads of Biocultural Diversity Discourse: the Hybridization of the Scientific Debate.

Concerning the impact of biocultural diversity discourse on the multicultural debate, embracing a cognitive injustice approach, recognition of different epistemologies/ontologies becomes a core issue to rethink the multicultural political project; it adds a new layer of complexity to the traditional debate on accommodation of

⁷⁴⁷ Mario Blaser, “Political Ontology: Cultural Studies without ‘cultures’?,” *Cultural Studies*, 2009..

⁷⁴⁸ Blaser, “Political Ontology: Cultural Studies without ‘cultures’?”

cultural diversity. In fact, embracing this approach means that the effective enjoyment of collective rights can occur only by recognizing: the adverse effects on indigenous epistemologies brought about by the modern model; acknowledging the privilege of modernity in shaping policies, laws and institutions; and re-appropriating meanings and discourses that have been marginalized. In term of conceptualization of collective rights, this means recognizing cultural/epistemological sovereignty as an intrinsic component of the right to self- determination, and pre-condition to exercise other collective rights.

As illustrated in Chapter 1, indigenous legal scholars have developed the idea of cultural sovereignty as a pre-condition to achieving an effective enjoyment of the rights to self-determination and other collective rights.⁷⁴⁹ In this context, sovereignty means re-appropriation of the meanings and symbols that the mainstream society has delegitimized and misrepresented. It also means, re-appropriate the use of the land and resources according to the community's cosmovision, and way of life. As Wenona Singel argues, cultural sovereignty refers to the counterforce to the dominant narrative that constructs the indigenous history and institutions. She sustains that this concept serves to dismantle the European colonization and the paternalistic and assimilationist policies imposed to indigenous peoples.⁷⁵⁰

Biocultural diversity can support the re-apportion of meanings, recognizing different epistemologies in the public debate, and bringing them into the state institutions. As decolonial scholarship argues, in a multicultural state is needed a process of decolonial hybridization of both the scientific debate and the existing institutions.⁷⁵¹ This scholarship has argued that in a multicultural debate there is a need to look at two processes, decolonization of the knowledge and decolonization of the legal field.

Concerning the former, this scholarship stresses the need to overcome the monoculture of knowledge in favor of the ecology of knowledges or pluriverse. De Sousa Santos describes the privilege of modernity over other epistemologies as 'monoculture of

⁷⁴⁹ Among other see: Coffey and Tsosie, "Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations"; Tsosie, "Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought"; Deloria and Clifford, *The Nations within: The Past and Future of American Indian Sovereignty*; Krakoff, "A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation"; Warrior, "Intellectual Sovereignty and The Struggle for An American Indian Future. Chapter 3 of Tribal Secrets"; Anaya, *Indigenous Peoples in International Law*.

⁷⁵⁰ Singel, "Cultural Sovereignty and Transplanted Law: Tensions in Indigenous Self-Rule."

⁷⁵¹ Sousa Santos, "Epistemologies of the South and the Future."

knowledge’.⁷⁵² The ‘monoculture of knowledge’ is opposed to the ‘ecology of knowledges’. The ecology of knowledges promotes an intercultural dialogue no a relativistic one. As Santos explains, this approach promotes ‘equality of opportunity’ in epistemological disputes that aim at maximizing their contributions and building a more democratic and just society and at decolonizing knowledge and power.⁷⁵³

In Chapter 3 illustrated the emergence of biocultural diversity discourse in the late 1990’s. This is an *inferi* (ongoing) discourse that originated in ethnoecology and ethnobiological studies. The core idea is that biological and cultural diversities are inextricably linked and interdependent. In conservation studies, this means that the resilience of ecosystems is mutually linked to that of human communities.⁷⁵⁴

Within this theoretical framework, the recognition and the conservation of cultural diversity becomes a critical issue to find new solutions to combat the current ecological crisis. Furthermore, the way the local communities use, construct and live in their territory is fundamental to the definition of ecosystems. The development of this idea of conservation in political and scientific fields can have a positive impact on the enjoyment of indigenous collective rights and the debate concerning multiculturalism.

As I showed in Chapter 3, biocultural diversity is based on the following core pillars:

- a) *Construction of nature based on the inextricable link between biological and cultural diversity.* The resilience of the ecosystems is mutually linked to that of human communities;
- b) *Construction of culture as endangered as biodiversity.* Culture is conceived as a pool of adaptive solutions that can be used by future generations, which needs to be protected;

⁷⁵² Boaventura de Sousa Santos, João Arriscado Nunes, and Maria Paula Meneses, “Opening up the Canon of Knowledge and Recognition of Difference,” in *Another Knowledge Is Possible: Beyond Northern Epistemologies*, ed. Boaventura de Sousa Santos, 2007.

⁷⁵³ Ibid.

⁷⁵⁴ Among others see: Madhav Gadgil et al., *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, 2000; D. Rapport and L. Maffi, “The Dual Erosion of Biological and Cultural Diversity: Implications for the Health of Eco-Cultural Systems,” in *Nature and Culture: Rebuilding Lost Connections*, 2010.

- c) *Relevance of communities in the definition of the ecosystem.* The way the local communities use, construct and live their territory is fundamental to define the idea of the ecosystem;
- d) *Dialogue of knowledge.* Recognizing the relevance of indigenous relational epistemology for conservation leads to the need to overcome the privilege of modernity in conservation and open up a new space for intercultural dialogue.

Because this discourse relativizes the canons of modernity by favoring the participation of indigenous epistemologies in defining objects of conservation, it has the potential to emancipate indigenous peoples by promoting a dialogue between knowledge, namely ecology of knowledges. In fact, biocultural diversity discourse restores indigenous epistemology as a fundamental praxis in pursuing conservation policies and activities. Because indigenous epistemologies are indispensable to conservation, conservation studies are compelled to focus on the way states accommodate cultural diversity and recognize indigenous epistemologies. Therefore, in biocultural diversity discourse, state policies that perpetuate the canons of modernity to the detriment of indigenous epistemologies need to be addressed as an ecological concern.⁷⁵⁵ In fact, these policies can lead to a loss of biodiversity by jeopardizing the indigenous community's relationship with its territory.

Under a biodiversity paradigm, TK is a reified and partial representation of the indigenous ways of life whose validity and utility is tested against the canon of positivist sciences and economic interests. Indigenous communities are only repositories of data to be collected.⁷⁵⁶ In this framework, those indigenous epistemologies that cannot meet the standards of positive science and economic utility, are labeled as backward, historical artifacts and, in some cases, environmentally dangerous, which must be modernized.

Biocultural diversity discourse opens up a new epistemological revolution in conservation. Overcoming the Cartesian separation between nature and culture, it offers a space to other epistemologies to participate in the debate on conservation. Furthermore,

⁷⁵⁵ Sarah Pilgrim et al., "The Intersections of Biological Diversity and Cultural Diversity: Towards Integration," *Conservation and Society* 7, no. 2 (2009): 100.

⁷⁵⁶ Escobar, "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements," 1998; Nemogá-Soto, "La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural."

re-conceptualizing the ecosystem as the product of the interrelation between culture and nature recognizes different ways of living the environment. In other words, biocultural diversity discourse acknowledges that Western science offers just a partial approach to understand the relationship between nature and human beings and that indigenous epistemology can contribute in this definition.⁷⁵⁷

This opens up the ground for a democratization of the scientific debate in conservation. As I showed in the case of the *Red*, ethnobiologists work together with communities to define the objects of conservation (see Section 3.5). This approach to conservation also comprises a legal dimension, a core issue of which is the recognition and implementation of the indigenous right to self-determination, as expressed in the laws and norms that dictate how territory is signified and used.⁷⁵⁸ Toledo points out that for indigenous communities the management of biological diversity is a means of reaching food sovereignty, and therefore territorial, political, and economic self-determination.⁷⁵⁹

The way the state copes with cultural differences becomes an ecological concern that needs to be framed as part of the solutions to address the ecological crisis. The intercultural dialogue becomes a fundamental component to find solutions to cope with the environmental crisis.⁷⁶⁰ This dialogue requires the advancement of an ethic of distinctiveness and a policy of differences.⁷⁶¹ The idea of sustainability needs to be re-conceptualized in a constant conversation with local experiences and epistemologies.⁷⁶² For Toledo sustainability entails citizen control over natural and social processes as an

⁷⁵⁷ Ibid.; Pierotti, Raymond, Daniel, “Traditional Ecological Knowledge: The Third Alternative (Commentary).”

⁷⁵⁸ Aída Castilleja González, “Sistemas de Conocimiento En Competencia: Un Estudio En Pueblos Purépecha Aída Castilleja González,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011).

⁷⁵⁹ Víctor Manuel Toledo, “Del ‘diálogo de Fantasmas’ Al ‘diálogo de Saberes’: Conocimiento Y Sustentabilidad Comunitaria,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (Ibero Puebla, México: UNAM, INAH, 2011).

⁷⁶⁰ Enrique Leff, “Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

⁷⁶¹ Ibid.

⁷⁶² Enrique Leff, “Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad,” in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch (Ibero Puebla, México : UNAM, INAH, 2011), 379–91.

alternative to modernity. Mainly, a society is sustainable when it recognizes cultural differences and allows for the recovery of the oppressed.⁷⁶³ Consequently, under biocultural diversity, situated experiences of indigenous communities become fundamental to establish conservation strategies according to the communities' epistemology and needs.

In this framework, the ways the communities represent and give meanings to resources become paramount to establish the conservation strategy. Biocultural diversity has an emancipatory potential for indigenous communities in so far as it relativizes the canon of modernity, offering new spaces for intercultural dialogue. Consequently, biocultural diversity discourse can be used to create and protect certain aspiration, instead of perpetuating the status quo. Indigenous communities can use this discourse as a counter-narrative to the modern hegemonic model to protect their expectations, ideas of territorial management, relationship with nature, and distinctive cosmovisions. For this reason, biocultural diversity can support the right to self-determination by strengthening the community's cultural sovereignty.

The case-study presented in Chapter 7 shows that the implementation of the Mexican conservation policy imposed use of the territory that was at odds with that of the community of Santiago Lachiguiri. Particularly, this policy adversely impacted the indigenous traditional agriculture that is a core for the indigenous existence as a distinctive people. The case of Santiago Lachiguiri shows that biocultural diversity discourse in conservation can be used to support the community's collective rights. In fact, it can offer a counter-narrative to the dominant one. Rely on biocultural diversity discourse, culture and biodiversity are inextricably tied; therefore, the *roza tumba y quema* from being an environmental negative practice can be seen as an expression of a distinctive epistemology that for centuries has contributed in the creation of diversity and the steward of the forest. Embracing biocultural diversity discourse, the NGO revealed the role of the culture in conservation overcoming the dominant stereotype that relegates indigenous agriculture to be an expression of poverty, ignorance, and archaism.

⁷⁶³ For the author a 'sustainable society' presents the following features: a) ecological restoration; b) social restoration; and c) cultural recognition and re-affirmation. Víctor Manuel Toledo, "Del 'diálogo de Fantasmas' Al 'diálogo de Saberes': Conocimiento Y Sustentabilidad Comunitaria," in *Saberes Colectivos Y Diálogo de Saberes En México*, ed. Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch (bero Puebla, México: UNAM, INAH, 2011).

To conclude, modernity constructs otherness relies on a dichotomist grid –archaic /progress, backward/ forward; savage/ civilized. As Latour argues, starting from this conceptual grid, indigenous peoples are allowed to participate in the debate on the ecological crisis only if they vest the role of the good savage.⁷⁶⁴ Biocultural diversity relativizes the canons of modernity enabling for overcoming this dichotomy. In fact, biocultural diversity discourse recognizes that there are several ways of transforming and connecting to the Earth. And this different way of relating with the Earth can enter into the debate concerning conservation and solutions to the ecological crisis. In this scenario, indigenous epistemologies are conceived as possible alternatives to offers solutions that can be in dialogue with positivist sciences. This mean opens the path for an ecology of knowledges in which indigenous ontologies have the chance to frame policies on conservation. That supports the re-appropriation of the meanings and symbols that the mainstream society has delegitimized and misrepresented. It also means, re-appropriate the use of the land and resources according to the community's cosmovision, and way of life. In this framework, indigenous epistemology becomes a possible alternative to manage and conserve the environment, opening up a space of dialogue with the government on the definition of the objects of conservation. If the core concern for decolonial scholarship is the exclusion and margination of indigenous epistemologies, biocultural diversity offers an argument for its recognition that is not based on the conformity to the canons of modernity. In fact, biocultural diversity discourse connects the relevance of the indigenous way of life to the uniqueness of certain landscapes.

8.3 Multiculturalism at the Crossroads of Biocultural Diversity Discourse: the Hybridization of the Legal Field

The previous section showed that biocultural diversity discourse contributes to decolonizing and democratizing the objects of conservation, thus the scientific debate. This section displays how this discourse can support the decolonization of the legal field and its re-imagination. On decolonizing the legal field, some authors have proposed to

⁷⁶⁴ Philippe Descola and Bruno Latour, *Approaches to the Anthropocene: A Conversation with Philippe Descola and Bruno Latour* available with <https://www.youtube.com/watch?v=MDeGaYkhVSo>.

look at that process of hybridization through which distinctive epistemologies are brought into the legal field.⁷⁶⁵ Some authors have started navigating the complex issue of the hybridization of the legal field to accommodate relational ontologies.⁷⁶⁶ For instance, Marisol De La Cadena's scholarship has focused on addressing the legal and political accommodation of those ontologies that do not separate between human beings and nature.⁷⁶⁷ In the case of the Andes, some indigenous groups interrelate in their daily life with entities -contemporarily spiritual, human, and natural- that she called earth beings. These entities cannot find a correspondence in the Western political and legal categories.⁷⁶⁸ As De La Cadena argues, the traditional political theory shows its limits not including the earth-beings in the political and legal debate.⁷⁶⁹ Her work raises several challenges that are relevant for the legal field in the era of ecological crisis. In fact, conservation policies ultimately address the relationship among nature, human beings, and non-human beings.

The integration of indigenous cosmovision in the definition of the environmental policies challenges the legal field. As the work of De La Cadena, Blaser, and Escobar shows, in recent years the process of hybridization of the Western legal field has started.⁷⁷⁰ The primary example is the constitutionalization of the right of *Pachamama* and Mother Earth in Ecuador and Bolivia.⁷⁷¹ A further example is the Supreme Court of

⁷⁶⁵ Boaventura Santos, Santos, Boaventura. 2014. *Epistemologies of the South. Justice against Epistemicide* (Boulder: Paradigm Publishers, 2014); Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010; Mario Blaser, "Notes towards a Political Ontology of 'Environmental' Conflicts," *Contested Ecologies: Dialogues in the South on Nature and Knowledge*, 2013.

⁷⁶⁶ Some anthropologists have stated to navigate this complex topic, see: De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'"; Mario Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages," *Cultural Geographies*, 2012; Arturo Escobar, "Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South," *AIBR Revista de Antropología Iberoamericana*, 2016.

⁷⁶⁷ Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016).

⁷⁶⁸ De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds*.

⁷⁶⁹ De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics.'"

⁷⁷⁰ Marisol De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics,'" *Cultural Anthropology*, 2010; Mario Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages," *Cultural Geographies*, 2012; Arturo Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?," *Cultural Studies* 24, no. 1 (2010): 1–65.

⁷⁷¹ De La Cadena, "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics'"; Blaser, "Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages"; Escobar, "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?"

Colombia⁷⁷² and New Zealand parliament⁷⁷³ recognition of inanimate entries- e.g., river, as juridical personhood.

This dissertation has shown that biocultural diversity discourse can support the re-imagine of the legal field to address different epistemologies; in fact, it can support the translation of indigenous epistemologies into the legal field.

As I showed in Chapters 4 and 5, these different epistemologies have not been satisfactorily addressed in the Mexican Constitution and Mexican legal system; in response to this *lacuna*, indigenous communities, sometimes supported by NGOs, have developed alternative strategies. As described in Section 4.6, one of these strategies has been relying on the *estatuto comunal* and other local legal acts; in fact, the *estatuto comunal* being an act recognized under the Mexican law can be opposed to external subjects that try to develop activities into their territory. As shown in Section 7.7, indigenous peoples have incorporated into their legal strategies a quest for the protection of non-humans consistencies- Mother Earth, seeds- and their epistemologies; thus, they have started a process of hybridization of the legal field.

In the case of Santiago Lachiguiri to re-appropriate their territory not only the community has embraced a counter-narrative to give support to its cosmovision vis-a-vis the dominate stereotypization of the agricultural practice but also integrated it into the new *estatuto comunal*. Particularly, biocultural diversity discourse allows the community to recover its agricultural system and epistemology and brings into the legal field the centrality that the cultivation of the corn has for the community. In this sense, communities can use the biocultural diversity discourse to regulate the use of their territory according to their consmovision.

Another example of hybridization of the legal field is the creation of indigenous-protected area under indigenous legal systems. Through this institution, communities vernacularize into their legal system the conservation discourse, while respecting their epistemologies and self-determination. In the case of the *Reserva Ecológica Campesina*, the indigenous-protected area became a tool to strengthen indigenous self-determination by implementing the following actions: promoting the food-sovereignty and the

⁷⁷² Colombian Constitutional Court, T-622 de 2016, November, 10 2016.

⁷⁷³ New Zealand, *Te Awa Tupua (Whanganui River Claims Settlement)*, Act 2017 (2017/7), March, 20 2017.

diversification of production, according to indigenous system of knowledge; using and managing the forest based on the customary legal system; recovering of the indigenous knowledge and technologies; and favoring a dialogue of knowledge with environmental NGOs and scientists on the process of conservation.⁷⁷⁴ The community-protected area becomes an alternative to the biodiversity model of conservation that commodifies, natural resources and disenfranchises indigenous epistemologies. In fact, in the case of Chimalapas, the promotion of an alternative model of conservation based on the communities' cosmovion and the recovery of indigenous knowledge is a manifestation of indigenous cultural sovereignty and the exercise of the right to self-determination.

As I showed in Chapter 7, environmental legal instruments- such as OT and the *plan de manejo*- can play a paramount role in the process of hybridization of the legal field to accommodate other ontologies/epistemologies. As the case of Santiago Lachiguiri shows, these instruments can limit the indigenous self-determination and the enjoyment of other collective rights by imposing certain uses and meanings over the indigenous territory and resources. Consequently, secondary legal acts can limit *de facto* enjoyment of collective right as recognized in the Constitution. However, the experience of other communities shows that these environmental legal instruments can be used to enhance collective rights by bringing different epistemologies at the frontline of legal struggles. For instance, in the case of Cuetzalan del Progreso, the Náhuatl indigenous community used the OT to re-appropriate indigenous relationship with nature and indigenous consmovision, as a tool to protect its territory against the development of economic projects, eg., tourism, and mining.⁷⁷⁵ The indigenous OT was adopted with a large and direct participation of Náhuatl peoples, through the organization of several meetings in the traditional form of Assembly.⁷⁷⁶ The indigenous OT mirrors the way Náhuatl people use their lands according to their cosmovision, protects the indigenous way of production with the nature,⁷⁷⁷ and addresses the economic interests of the inhabitants of the

⁷⁷⁴ Miguel Ángel García Aguirre, *Chimalapas: La Defensa Del Territorio Y de Los Bienes Naturales Como Un Factor de Identidad Indígena* (Ceccam, Brot für die Welt, 2015); Miguel Angel García, "La Reserva Ecológica Campesina de Los Chimalapas," 1997.

⁷⁷⁵ Leonardo Durán Olguín, "El Ordenamiento Territorial Ecológico de Cuetzalan, Una Herramienta Para La Defensa Del Territorio Ante Megaproyectos," *La Jornada de Oriente*, June 17, 2014.

⁷⁷⁶ "Kenij Omachiuel Moyektalis in Altepét (Ordenamiento Ecológico Territorial Del Municipio de Cuetzalan: Instrumento Pare La Coexistencia SocioambientalIntegral," in *Conferencia Con La Universidad Autónoma de Ciudad Juárez, Febrary 12*, (Ciudad Juárez, Chihuahua, 2011).

⁷⁷⁷ Ibid.

municipality.⁷⁷⁸ During the process of adoption of the OT, there was also a ‘dialogue of knowledge’ between indigenous people and scientists for the definition of the objects of conservation.⁷⁷⁹

The municipality of Cuetzalan del Progreso adopted the indigenous OT that became legally binding under the Mexican legal system; consequently, the community has been able to use it as a legal strategy to fight against large-scale development projects promoted by private companies in their territory. Furthermore, around the OT, the community created new institutions to guarantee the direct participation of indigenous members in the management and conservation of their territory;⁷⁸⁰ therefore, the community strengthened its right to self-government dismantled under the current Mexican development policy.

To conclude, in response to a Mexican legal system that does not enter into a dialogue with indigenous epistemologies, the above-illustrated cases show a trend in which indigenous peoples bring non-humans consistencies and their epistemologies into the legal struggles against the development of mega-projects and policies that jeopardize their cultural sovereignty. Consequently, oppressed and misrecognized conceptualization of nature and relationships between nature and culture are brought in the legal field. Through these legal actions, indigenous peoples seek to re-frame the legal system to accommodate their epistemologies and to promote an idea of self-determination that embraces cultural sovereignty. The challenge for future research will be looking at how the Mexican legal system deals and recognizes these new forms of legalities.

8.4 Suggestions for Future Research

This dissertation can only grasp some of the implications and effects of the conservation policies on the debate on multiculturalism and enjoyment of collective rights in the era of ecological crisis. As I showed, issues of environmental degradation,

⁷⁷⁸ Oranismo oficial del comité de ordenamiento territorial integral de Cuetzalan, “Ordenamiento Territorial Integral Keniuj Omachiuel Moyektalis in Altepét,” February 2011.

⁷⁷⁹ Ibid.

⁷⁸⁰ “Keniuj Omachiuel Moyektalis in Altepét (Ordenamiento Ecológico Territorial Del Municipio de Cuetzalan: Instrumento Pare La Coexistencia SocioambientalIntegral.”

cultural oppression, and conservation of nature cannot be thought of separately. Therefore, one of the primary objectives of this work is to attract the attention of legal scholars on the need to re-shape the methodological and theoretical framework to understand legal processes at the intersection of conservation studies and accommodation of cultural diversity in the era of ecological crisis.

As Gear points out: “our future socio-ecological imaginary and life-world should seek to be (and should be understood to be) richly *co-constructed* – *negotiated* in an explicitly trans-cultural, trans-disciplinary set of conversations and encounters.”⁷⁸¹ Because the novelty of the field of inquiry that questions some of the core assumptions of modernity, following Gear’s recommendation, this dissertation relies on a multi-disciplinary and cross-cultural methodology in which I combined traditional scholarship with situated experiences of indigenous communities. Mainly, I relied on theories and methods developed by different disciplines such as anthropology, sociology, ethnoecology, biology, and legal studies; particularly, I used critical theory, decolonial studies, Science Technology and Social Studies (STS) and Community Based Participatory Research (CBPR).

Furthermore, following the so-called ‘scholarship of the South’,⁷⁸² I sought to give voice and standing to those groups that have suffered cultural oppression and domination. In fact, as many authors have pointed out, the category offered by the Western modern Eurocentric model is not enough to analyze the current ecological crisis and to imagine alternatives.⁷⁸³ Consequently, I shared the voice with Mexican indigenous

⁷⁸¹ Anna M. Gear, “Towards a New Horizon: In Search of a Renewing Socio-Juridical Imaginary,” *Oñati Socio-Legal Series* 3, no. 5 (2013), p. 970.

⁷⁸² Among others see: Boaventura Santos de Sousa, *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition* (New York, London : Routledge, 1995); Arturo Escobar, “Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?,” *Cultural Studies* 24, no. 1 (2010): 1–65; Marisol De La Cadena, *Earth Beings: Ecologies of Practice across Andean Worlds* (Durham: Duke university press, 2016); Mario Blaser, “Ontological Conflicts and the Stories of Peoples in Spite of Europe,” *Current Anthropology* 54, no. 5 (2013); Jaime Luna Martínez, *Eso Que Lllaman Comunalidad* (Oaxaca: Colección Diálogos, 2010); Sofía Robles Hernández and Rafael Cardoso Jiménez, eds., *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*, Vol. 14 (UNAM, 2007).

⁷⁸³ Among other see the post-colonialism debate: Vandana Shiva, *Who Really Feeds the World?* (Zed Books Ltd, 2016).; the STS debate: John Law, *After Method: Mess in Social Science Research* (Routledge, 2004); Gisli Pálsson Ingold, Tim, ed., *Biosocial Becomings: Integrating Social and Biological Anthropology* (Cambridge University Press, 2013).; Philippe Descola and Bruno Latour, *Approaches to the Anthropocene: A Conversation with Philippe Descola and Bruno Latour*

intellectuals and community members; whose voices are often absent from the dominant academic debate in the North. And by North, I mean Europe and North America. For the above reasons, as part of my methodology, I relied on, not only existing literature but also materials collected during my fieldwork in Mexico, in particular in the State of Oaxaca.

Although my intent to offer a coherent and original framework to read the interconnection among conservation studies, indigenous collective rights and multiculturalism, future works should further contribute in this emerging theoretical field of inquiry.

The ecological crisis has led to a loss of faith in modern progress, opening up new space to rethink categories such as the division between nature and culture, and the idea of the planet.⁷⁸⁴ Consequently, the law has become a space of ‘contested’ alternatives to image the world and the society. One of the pressing issues brought about by my dissertation, it is the need to decolonizing the legal field. Mainly, I suggested looking at the process of hybridization, through which, Western juridical categories are challenged to accommodate different epistemologies/ontologies that do not separate nature and culture.

In this strain of arguments, I suggest future research to focus on:

- a) the theoretical and philosophical implications of the challenge that has been launched to the Western legal construction of subjectivity to accommodate different epistemologies/ontologies that do not separate between nature and culture;
- b) the phenomena of hybridization of the legal field with different epistemologies addressing the following topics: i) how the international human rights system deals with this topic; ii) how the state legal system deals and recognizes new forms of legalities that are emerging in the indigenous customary legal systems; iii) how the jurisprudence of domestic and international Courts relates with different epistemologies in addressing the violation of indigenous collective rights; and iv) what is the role of the legal protection of non-human entities in enhancing indigenous collective rights.

<https://www.youtube.com/watch?v=MDeGaYkhVSo>; Donna Haraway, *2016 Anthropocene Consortium Series*, <https://www.youtube.com/watch?v=fWQ2JYFwJWU&t=4509s>.

⁷⁸⁴ In this regard, see the debate on Gaia, for an overview: Bruno Latour, *Why Gaia is not the Globe* <https://www.youtube.com/watch?v=7AGg-oHzPsM>.

Future research should also look at the emerging quest of ‘non-traditional’ collective entities to be entitled to collective rights. These groups advance their requests based on their role in conserving the environment and/or their unique interest in maintaining certain landscapes; these groups include, farmers, local communities, and future generation.

In this dissertation, I showed the relevance of secondary legal sources –OT, *plan de manejo*- in implementing the conservation policy and therefore projecting certain use and meanings over the indigenous territory. Future research should look at: a) the relation between collective rights recognized in the Constitution and environmental legal instruments; b) compare the cases in which these instruments had an emancipatory potential with those in which they limited indigenous collective rights; c) the mechanisms and processes through which they can have an emancipatory potential in order to find ‘best practices’ that the community can share with other communities to advance their collective rights; and d) the process of vernacularization of these instruments into the indigenous legal systems and the emergence of new legal institutions linked to these environmental instruments.

Finally, this dissertation showed the paramount role of conservation NGOs in implementing conservation policies in indigenous territories. Future research should investigate the role of conservation NGOs in supporting or limiting indigenous collective rights; particularly looking at their position in a) the vernacularization of conservation discourses in the indigenous legal systems; and b) decolonizing the objects of conservation by engaging in an intercultural dialogue with local communities in the process of adoption of environmental instruments.

Bibliography

- Abisaí J. García-Mendoza, Ordonez, María de Jesús Díaz, Briones-Salas, Miguel, ed. *Biodiversidad de Oaxaca*. UNAM, 2004.
- Acevedo Conde, María Luisa. *Geografía Histórica de Oaxaca*. Gobierno Constitucional del Estado de Oaxaca, Secretaría de Asuntos Indígenas, 2002.
- Agrawal, Arun. "Dismantling the Divide Between Indigenous and Scientific Knowledge." *Development and Change*, 1995.
- . *Environmentality, Technologies of Government and the Making of Subjects*. Durham, N.C.: Duke University Press, 2005.
- Aguilar, Hugo. "Las Leyes Energéticas Y Su Impacto en La Autonomía de Los Territorios Indígenas Y Campesinos." In *La Nueva Servidumbre Agraria y La Resistencia Indígena Y Campesina*, edited by Ana Hernández Navarro, Luis , de Ita Rubio, 11–20. Mexico: Centro de Estudios para el Cambio en el Campo Mexicano, 2016.
- Aguirre Beltrán, Gonzalo Báez-Jorge. *Regiones de Refugio: El Desarrollo de La Comunidad Y El Proceso Dominical En Mestizoamérica*. Mexico: Universidad Veracruzana Instituto Nacional Indigenista Gobierno del Estado de Veracruz Fonod de Cultura Económica, 1991.
- Alcántara C. B, Hewitt de. *La Modernización de La Agricultura Mexicana, 1940-1970*. Edited by Sligo Ventuno Editores, 1978.
- Alcorn, Janis B. "Indigenous Peoples and Conservation Conservation Biology 7, No. 2 (1993): 424-426." *Conservation Biology* 7, no. 2 (1993): 424–26.
- Anaya, S. James. *Indigenous Peoples in International Law*. Oxford University Press, 2004.
- Andersen, Regine., and Tone Winge, eds. *Realising Farmers' Rights to Crop Genetic Resources: Success Stories and Best Practices*. Routledge, 2013.
- Anderson, Eugene N. "Biodiversity Conservation: A New View from Mexico." In *Ethnobiology and Biocultural Diversity: Proceedings of the Seventh International Congress of Ethnobiology*, edited by Rebecca K. Zarger John R. Stepp, Felice S. Wyndham, 113–22. International Society of Ethnobiology, 2002.
- Angioni, Giulio. "Indigenous Knowledge: Subordination and Localism." In *Nature, Knowledge: Ethnoscience, Cognition, and Utility*, edited by Glauco Sanga and Gherardo Ortalli, Berghahn Books., 287–96, 2003.
- Anta-Fonseca, S, and Leticia Merino. "El Manejo Comunitario de Los Recursos Naturales En Oaxaca." *The Common Property Resource* 66 (2003): 1–3.
- Anta Fonseca, Salvador, Arreola Muñoz, Arturo V., González Ortiz, Marco A., Acosta González, Jorge, ed. *Ordenamiento Territorial Comunitario: Un Debate de La Sociedad Civil Hacia La Construcción de Políticas Públicas*. Instituto Nacional de Ecología, 2006.
- Aoki, Keith. *Seed Wars, Controversies and Cases on Plant Genetic Resources and Intellectual Property*. Carolina Academic Press, 2008.
- Apffel-Marglin, Frédérique, Marglin, Stephen A., ed. *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*. Oxford University Press, 1996.
- Aquino, Joel. "Líder Indígena Zapoteco, Yalálag, Oaxaca." In *Derecho Indígena*, edited

- by Magdalena Gomez. INI, 1997.
- Aquino Centeno, Salvador. "Interrogando La Costumbre Y La Legislación Indígena: Contribuciones Y Horizontes de La Antropología Jurídica En Oaxaca." *Nueva Antropología* 26, no. 78 (2013): 87–117.
- Aquino Moreschi, Alejandra. "La Comunalidad Como Epistemología Del Sur. Aportes Y Retos." *Cuadernos Del Sur, Revista de Ciencias Sociales* 8, no. 34 (2013).
- Aquino Zacarías, Plutarco. "Nuestra Comunalidad: Reflexiones Desde Yalalag." *Alejandra Aquino Moreschi, "La Comunalidad Como Epistemología Del Sur. Aportes Y Retos," Cuadernos Del Sur, Revista de Ciencias Sociales* 8, no. 34 (2013).
- Arellano López, Jessica Gabriela, Betancourt Posada, Alberto, Cruz Marín, José Efraín. "Murmullo de Sueños: Historia de La Ciencia, Diversidad Epistémica Y Conservación de La Biodiversidad En Las Áreas Naturales Protegidas de México." In *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas*, edited by E. Cruz Betancourt, A., J. Arellano, T. Campos. UNAM, 2014.
- Argueta Villamar, Arturo. "El Diálogo de Saberes, Una Utopía Realista." In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Arturo Argueta, Eduardo Corona-M, and Paul Hersch. Ibero Puebla, México: UNAM, INAH, 2011.
- Asebey, Edgar J., and Jill D. Kempenaar. "Biodiversity Prospecting: Fulfilling the Mandate of the Biodiversity Convention." *Vand. J. Transnat'l L.* 28 (1995): 703.
- Asociación Nacional de Afectados Ambientales. "Devastación Del Patrimonio Biocultural de México." Mexico, D.F, 2013.
- Azuela, Antonio, Concepción Contreras, Miguel Angel Cancino, ed. *El Ordenamiento Ecológico Del Territorio En México: Génesis Y Perspectivas*. México DF: Secretaría de Medio Ambiente y Recursos Naturales, 2006.
- Azuela, Antonio, and Paula Mussetta. "Algo Más Que El Ambiente. Conflictos Sociales En Tres Áreas Naturales Protegidas de México." *Revista de Ciencias Sociales (Universidad Nacional de Quilmes)* 1, no. 16 (2009).
- Bagele, Chilisa. *Indigenous Research Methodologies*. Thousand Oaks: Sage, 2012.
- Balée, William L. *Footprints of the Forest: Ka'apor Ethnobotany: The Historical Ecology of Plant Utilization by an Amazonian People. Biology and Resource Management in the Tropics*, 1994.
- Barabás, Alicia, and Miguel Alberto Bartolomé. *Etnicidad Y Pluralismo Cultural: La Dinámica Étnica En Oaxaca. Colección Regiones*, 1990.
- Bárcenas López, Francisco. *El Régimen de La Propiedad Agraria En México. Primeros Auxilios Jurídicos Para La Defensa de La Tierra Y Los Recursos Naturales*. Centro de Orientación y Asesoría a Pueblos Indígenas A.C., Centro de Estudios para el Cambio en el Campo Mexicano, Instituto Mexicano para el Desarrollo Comunitario A.C., Servicios para una Educación Alternativa EDUCA A.C, 2017.
- . *Legislación Y Derechos Indígenas En México*. Centro de estudios para el Desarrollo Rural Sustentable y la Soberanía Alimentaria ,Cámara de Diputados, LXI legislatura, 2010.
- . "Recursos Genéticos, Conocimiento Tradicional Y Derecho Indígenas." In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Arturo Argueta, E. Corona-Martínez, and Paul Hersch. Ibero Puebla: UNAM, INAH, 2011.
- Barmeyer, Niels. "Local Effects of Global Forest Conservation Policy: On Zapotec

- Resistance.” In *Fields and Forests Ethnographic Perspectives on Environmental Globalization*, edited by Münster Ursula, Daniel Münster, and Stefan Dorondel. RCC Perspectives, 2012.
- Barreto, J.-M. “Epistemologies of the South and Human Rights: Santos and the Quest for Global and Cognitive Justice.” *Indiana Journal of Global Legal Studies*, 2014.
- Baumann, Miges, Janet Bell, Florianne Koechlin, and Michel Pembert, eds. *The Life Industry: Biodiversity, People and Profits*. London: Intermediate Technology Publications, 1996. London: Intermediate Technology Publications, 1996.
- Bavikatte, Kabir, and Daniel F Robinson. “Towards a People’s History of the Law: Biocultural Jurisprudence and the Nagoya Protocol on Access and Benefit Sharing.” *Law, Environmental and Development Journal*, 2011.
- Bavikatte, Kabir Sanjay, and Tom Bennett. “Community Stewardship: The Foundation of Biocultural Rights.” *Journal of Human Rights and the Environment*, 2015.
- Bavikatte, Sanjay. *Stewarding The Earth: Rethinking Property and the Emergence of Biocultural Rights*. Oxford University Press, 2014.
- Berkes, Fikret. *Sacred Ecology*. Routledge, 2012.
- Berlin, Brent. *Ethnobiological Classification: Principles of Categorization of Plants and Animals in Traditional Societies*. Princeton University Press, 2014.
- Berlin, and Brent. “Community Autonomy and the Maya ICBG Project in Chiapas, Mexico: How.” *Elois Ann Human Organization Winter* 63, no. 4 (2004).
- Betancourt, A., J. Arellano, T. Campos, E. Cruz, ed. *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas*. UNAM, 2014.
- Betancourt Posada, Alberto, Tihui Campos Ortiz, Griselda, Efraín Cruz Marín, José, Fritsche, Katja Jeglitzka, Elisabeth, Marion Lloyd, Ana Beatriz Pérez Galvis, Emilio Riva Palacio de Icaza, Marie Andrée Roy, Vanessa Strickland. “¿Cuánto Vale La Sabiduría Tradicional? El Papel Asignado a Los Conocimientos de Los Pueblos Originarios En El Capital Natural de México.” In *Del Monólogo a La Polifonía: Proyectos Supranacionales Y Saberes Indígenas En La Gestión de Áreas Naturales Protegidas*. UNAM, 2014.
- Biber-Klemm, Susette, and Thomas Cottier, eds. *Rights to Plant Genetic Resources and Traditional Knowledge: Basic Issues and Perspectives*. CABI, n.d.
- Bishop, Joshua, and Chloe Hill, eds. *Global Biodiversity Finance: The Case for International Payments for Ecosystem Services*. Edward Elgar Publishing, 2014.
- Blaser, Mario. “Notes towards a Political Ontology of ‘Environmental’ Conflicts.” *Contested Ecologies: Dialogues in the South on Nature and Knowledge*, 2013.
- . “Ontological Conflicts and the Stories of Peoples in Spite of Europe.” *Current Anthropology* 54, no. 5 (2013).
- . “Ontology and Indigeneity: On the Political Ontology of Heterogeneous Assemblages.” *Cultural Geographies*, 2012.
- . “Political Ontology: Cultural Studies without ‘cultures’?” *Cultural Studies*, 2009.
- Boaventura de Sousa, Santos, ed. *Another Knowledge Is Possible: Beyond Northern Epistemologies*. Paperback, 2007.
- Boege, Eckart. “El Patrimonio Biocultural de Los Pueblos Indígenas de Mexico: Hacia La Conservación in Situ de La Biodiversidad Y Agrobiodiversidad En Los Territorios Indígenas.” *INAH*, 2008.

- Bonfil Batalla, Guillermo. *México Profundo: Reclaiming a Civilization. Transaltion from Latin America Series*. University of Texas Press, 1996.
- Bourdieu, Pierre. "The Essence of Neoliberalism." *Le Monde Diplomatique*, 1998.
- Bourdieu, Pierre, and Loic Wacquant. "New Liberal Speak: Notes on the New Planetary Vulgate." *Radical Philosophy*, 2001.
- Bray, David, Elvira Duran, and Oscar Molina. "Beyond Harvests in the Commons: Multi-Scale Governance and Turbulence in Indigenous/community Conserved Areas in Oaxaca, Mexico." *International Journal of the Commons* 6, no. 2 (2012).
- Bray B, David , Duran, Elvira, Anta, Salvador, and Mondragón Fernando .Martin, J Gary. "A New Conservation and Development Frontier: Community Protected Areas in Oaxaca Mexico." *Current Conservation*, no. 2 (2008): 7–9.
- Brockington, Dan, Rosaleen Duffy, and Jim Igoe, eds. *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas*. Earthscan, 2008.
- Brown, Ed, Jonathan Cloke, Danielle Gent, Paul H. Johnson, and Chloe Hill. "Green Growth or Ecological Commodification: Debating the Green Economy in the Global South." *Geografiska Annaler: Series B Human Geography* 96, no. 3 (2014): 245–59.
- Brown, Peter. "Maya Mother Seeds in Resistance of Highland Chiapas in Defense of Native Corn." In *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of Biodiversity* , 151–77. Tucson: The Univerity of Arizona Press, 2013.
- Brysk, Alison. *From Tribal Village to Global Village: Indian Rights and International Relations in Latin America*. Stanford University Press, 2000.
- Bubela, Tania, and E. Richard Gold, eds. *Genetic Resources and Traditional Knowledge: Case Studies and Conflicting Interests*. Edward Elgar Publishing, 2012.
- Burdon, Peter. "Wild Law: The Philosophy of Earth Jurisprudence." *Alternative Law Journal*, 2010.
- Butt, C. J., Judith A. Blake, Mark D. Adams, Owen White, Granger Sutton, Rebecca Clayton, Anthony R. Kerlavage, Chris Fields, and J. Craig Venter. "The Impact of Rapid Gene Discovery Technology on Studies of Evolution and Biodiversity." In *Biodiversity II: Understanding and Protecting Our Biological Resources*, edited by Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson. Washington, DC: Joseph Henry Press, 1997.
- Cañas, R., A., Ortiz-Monasterio, E. Huerta, and X. Zulueta. "Cañas, R., A. Ortiz-Monasterio, E. Huerta, and X. Zulueta. "Marco Legal Para El Conocimiento Tradicional Sobre La Biodiversidad." In *Capital Natural de México 1*, 557–64, 2008.
- Capra, Fritjof, Mattei, Ugo. *The Ecology of Law: Toward a Legal System in Tune with Nature and Community*. Berrett-Koehler Publishers, 2015.
- Caravana de la Diversidad Biocultural. "Pronunciamiento Del Diálogo Indígena Y Campesino de La Caravana de La Diversidad Biocultural, December 1st." Ciudad de México, 2016. http://sinmaiznohaypais.org/wp-content/uploads/2017/01/Pronunciamiento-Dialogo-Indigena-y-Campesino_abstract.pdf.
- Cárdenas, Roosbelinda. "Green Multiculturalism: Articulations of Ethnic and Environmental Politics in a Colombian 'Black Community.'" *Journal of Peasant Studies*, 2012.
- Carlson, Thomas JS., and Luisa Maffi. "Introduction." In *Ethnobotany and Conservation*

- of *Biocultural Diversity*, edited by Thomas JS. Carlson and Luisa Maffi, 1–5. New York: New York Botanical Garden, 2004.
- Carlson Thomas JS, Maffi Luisa. *Ethnobotany and Conservation of Biocultural Diversity*. Edited by Luisa Maffi Carlson Thomas JS. new york: New York Botanical Garden, 2004.
- Carrillo Trueba, César. “El Origen Del Maíz Naturaleza Y Cultura En Mesoamérica.” *Ciencias* , 2009.
- Carrithers, M., M. Candea, K. Sykes, M. Holbraad, and S. Venkatesan. “Ontology Is Just Another Word for Culture: Motion Tabled at the 2008 Meeting of the Group for Debates in Anthropological Theory, University of Manchester.” *Critique of Anthropology*, 2010.
- Carson, Rachel. *Silent Spring*. Houghton Mifflin Harcourt, 2002.
- Castañeda, Jorge. “Roza, Tumba Y Quema Destruye Miles de Hectáreas En México.” *Foro Ambiental*, 2016. <http://www.foroambiental.com.mx/roza-tumba-y-quema-destruye-miles-de-hectareas-en-mexico/>.
- Castilleja González, Aída. “Sistemas de Conocimiento En Competencia: Un Estudio En Pueblos Purépecha Aída Castilleja González.” In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch. Ibero Puebla, México : UNAM, INAH, 2011.
- Castro-Gómez, Santiago. “Ciencias Sociales, Violencia Epistémica Y El Problema de La ‘Invención Del Otro.’” *La Colonialidad Del Saber: Eurocentrismo Y Ciencias Sociales. Perspectivas Latinoamericanas*, 2000.
- Ceccam. “Concesiones Mineras, Parques Eólicos Y Áreas de Conservación En El Estado de Oaxaca,” 2017.
- Centro de Estudios para el Cambio en el Campo Mexicano. “México: Efectos de Las Políticas de Conservación Frente a La Crisis Climática Para Las Comunidades Indígenas Y Campesinas,” 2014.
- Centro de Estudios para el Cambio en el Campo Mexicano, Brot. “Crisis Climática Y Defensa de Los Territorios Indígenas Y Campesinos -28 Y 29 de Octubre de 2015.” *Memoria Del Encuentro* , 2015.
- Chapela, Francisco. “Indigenous Community Forest Management in the Sierra Juarez, Oaxaca.” In *The Community Forests of Mexico: Managing for Sustainable Landscapes*, edited by David Barton Bray, Leticia Merino-Pérez, and Deborah Barry, 91–111. University of Texas Press, 2005.
- Chilisa, Bagele. *Indigenous Research Methodologies*. Sage Publications, 2011.
- Clavero, Bartolomé. “Constitucionalización Mexicana de Los Derechos Humanos, Inclusive Los Derechos de Los Pueblos Indígenas.” *Revista Española de Derecho Constitucional* , 2013, 181–99.
- . *Geografía Jurídica de América Latina: Pueblos Indígenas Entre Constituciones Mestizas*. Siglo XXI, 2008.
- Cocks, Michelle. “Biocultural Diversity: Moving beyond the Realm of ‘indigenous’ and ‘local’ People.” *Human Ecology* 34, no. 2 (2006): 185–200.
- Coffey, Wallace, and Rebecca Tsosie. “Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations.” *Stanford Law and Policy Review*, 2001.
- Colchester, Marcus. *Salvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation*. Vol. 55. Diane Publishing, 1994.

- Colectivo por la Autonomía, Grupo ETC y GRAIN. *¡No Toquen Nuestro Maíz! (El Sistema Agroalimentario Industrial Devasta Y Los Pueblos En México Resisten)*. GRAIN, Editorial Itaca, 2014.
- Colwell, Rita R. "Microbial Biodiversity and Biotechnology." In *Biodiversity II: Understanding and Protecting Our Biological Resources*, edited by Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson. Washington, DC : Joseph Henry Press, 1996.
- Commoner, Barry. *The Closing Circle: Confronting the Environmental Crisis*. London: Cape, 1972.
- Concheiro Borquez, Luciano, and Francisco Barcenas López, eds. *Biodiversidad Y Conocimiento Tradicional En La Sociedad Rural. Entre El Bien Común Y La Propiedad Privada*. Centro de Estudios para el desarrollo rural sustentable y la soberanía Alimentaria, 2006.
- Coombe, Rosemary J. "Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity." *Indiana Journal of Global Legal Studies*, 1998, 59–115.
- Coordinadora Nacional Indígena y Campesina. *Política de Género Desde La Cosmovisión Maya*, 2007.
- Cott, Donna Lee Van. *From Movements to Parties in Latin America: The Evolution of Ethnic Politics*. Cambridge University Press, 2007.
- . "Indigenous Peoples' Politics in Latin America." *Annual Review of Political Science*, 2010.
- Crutzen, Paul J. "The 'Anthropocene.'" In *Earth System Science in the Anthropocene*, 13–18. Springer Berlin Heidelberg, 2006.
- Cruz Rueda, Elisa. "Derecho a La Tierra Y El Territorio: Demandas Indígenas, Estado Y Capital En El Istmo de Tehuantepec." In *Justicias Indígenas Y Estado: Violencias Contemporáneas*, edited by María Teresa Sierra, Rosalva Aída Hernández, and Rachel Sieder, 341–82. FLACSO-México, 2013.
- D.Nations, James. "Deep Ecology Meets The Developing World." In *Biodiversity*, edited by Edward O. Wilson and Frances M. Peter. Washington, DC: National Academy Press, 1990.
- Daes, Erica-Irene A. "Indigenous Peoples' Rights to Land and Natural Resources." In *Minorities, Peoples and Self-Determination: Essays in Honour of Patrick Thornberry*, edited by Nazila Ghanea-Hercock, Alexandra Xanthaki, and Patrick Thornberry. Martinus Nijhoff Publishers, 2005.
- Dalby, Simon. "Anthropocene Geopolitics: Globalisation, Empire, Environment and Critique." *Geography Compass* 1, no. 1 (2007): 103–18.
- Dandler, Jorge. "Indigenous People's and the Rule of Law in Latin America: Do They Have a Chance?" In *The (Un) Rule of Law and the Underprivileged in Latin America*, edited by Juan E. Méndez, Guillermo A. O'Donnell, and Paulo Sérgio Pinheiro. University of Notre Dame Press, 1999.
- Darrell, Posey. "Indigenous Ecological Knowledge." In *Paradigm Wars*, edited by Jerry Mander and Victoria Tauli-Corpuz, n.d.
- Delden, Wilke van. "Genetic Diversity and Its Role in the Survival of Species." In *Biodiversity and Global Change*, edited by Otto Thomas Solbrig, H. M. Van Emden, and P. G. W. J. Van Oordt. Cab international, 1994.

- DeLong, Don C. "Defining Biodiversity." *Wildlife Society Bulletin* 24, no. 4 (1996): 738–49.
- Deloria, Vine. *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*. Fulcrum Publishing, 1995.
- Deloria, Vine, and M. Lytle Clifford. *The Nations within: The Past and Future of American Indian Sovereignty*. University of Texas Press, 1984.
- Denevan, William M. *Cultivated Landscapes of Native Amazonia and the Andes*. Oxford Geographical and Environmental Studies, 2001.
- Denzin, Norman K., Yvonna S. Lincoln, and Linda Tuhiwai Smith, eds. *Handbook of Critical and Indigenous Methodologies*. Sage, 2008.
- Díaz Gómez, Floriberto. "Comunidad Y Comunalidad." *Culturas Populares E Indígenas, Cultura Indígena*, 2004, 365: 373.
- Dove, Michael. "Indigenous People and Environmental Politics." *Annual Review of Anthropology* 35 (2006).
- Dove, Michael R, Daniel S Smith, Marina T Campos, Andrew S Mathews, Anne Rademacher, Steve Rhee, and Laura M Yoder. "Globalisation and the Construction of Western and Non-Western Knowledge." In *Local Science Vs Global Science*, 2009.
- Durán Olguín, Leonardo. "El Ordenamiento Territorial Ecológico de Cuetzalan, Una Herramienta Para La Defensa Del Territorio Ante Megaproyectos." *La Jornada de Oriente*, June 17, 2014.
- Dussel, Enrique. *The Invention of the Americas. Eclipse of "the Other" and the Myth of Modernity*. Continuum Intl Pub Group (Sd), 1997.
- Dutfield, Graham. "A Critical Analysis of the Debate on Traditional Knowledge. Drug Discovery and Patent-Based Biopiracy." *European Intellectual Property Review* 33, no. 4 (2011): 238–45.
- . "The Public and Private Domains Intellectual Property Rights in Traditional Knowledge." *Science Communication* 21, no. 3 (2000): 274–95.
- Dyke, Fred Van. *Conservation Biology: Foundations, Concepts, Applications*. Springer Science & Business Media, 2008.
- Eastmond, Amarella, and Betty Faust. "Farmers, Fires, and Forests: A Green Alternative to Shifting Cultivation for Conservation of the Maya Forest?" In *Landscape and Urban Planning*, 2006.
- EDUCA. "Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca." Oaxaca, 2004.
- Ehrlich, Paul. *The Population Bomb*. 1968. New York: Ballantine , n.d.
- Ehrlich, Paul R., and Edward O. Wilson. "Biodiversity Studies: Science and Policy." *1991* 253, no. 5021 (n.d.).
- Ellen, Roy, and Holly Harris. "Indigenous Environmental Knowledge, the History of Science and the Discourse of Development." In *Nature Knowledge: Ethnoscience, Cognition and Utility*, edited by Glauco Sanga and Gherardo Ortalli, 297–300. Berghahn Books, 2003.
- Endere, Maria Luz. "Archaeological Heritage Legislation and Indigenous Rights in Latin America: Trends and Challenges." *International Journal of Cultural Property* 21, no. 3 (2014): 319–30.
- Escobar, A. "Whose Knowledge Whose Nature? Biodiversity Conservation and the Political Ecology of Social Movements." *Journal of Political Ecology*, 1998.

- Escobar, Arturo. "Construction Nature: Political Elements for a Post-Structuralist Ecology." *Futures* 28, no. 4 (1996): 325–43.
- . *Encountering Development. The Making and Unmaking of the Third World. The Making and Unmaking of the Third World*, 1995.
- . "Latin America at a Crossroads: Alternative Modernizations, Post-Liberalism, or Post-Development?" *Cultural Studies* 24, no. 1 (2010): 1–65.
- . *Territories of Difference: Place, Movements, Life, Redes*. Duke University Press, 2008.
- . "Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South." *AIBR Revista de Antropologia Iberoamericana*, 2016.
- . "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements." *Journal of Political Ecology* 5, no. 1 (1998): 53–82.
- . "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements." *Journal of Political Ecology* 5 (1998): 53–82.
- Espacio Estatal en Defensa del Maíz Nativo. "La Ley de Semillas Un Atentado Al Maiz Nativo Y a La Prácticacampesina." Oaxaca, 2014.
- Esteva, Gustavo. "Hosting the Otherness of the Other: The Case of the Green Revolution." In *Decolonizing Knowledge: From Development to Dialogue*, edited by Stephen Appfel-Marglin, Frederique, Marglin A., 249–78, 1996.
- Evans, David. *A History of Nature Conservation in Britain*. Psychology Press, 1997.
- Falzon, Mark-Anthony, ed. *Multi-Sited Ethnography: Theory, Praxis and Locality in Contemporary Research*. Routledge, 2016.
- Faust, Betty Bernice. "Maya Environmental Successes and Failures in the Yucatan Peninsula." *Environmental Science and Policy*, 2001. doi:10.1016/S1462-9011(01)00026-0.
- Flores Cruz, Cipriano. "Comentario Al Modulo." In *EDUCA, Seminario Reconstrucción de Los Sistemas Políticos En Municipios Indígenas de Oaxaca, 2003-2004*. EDUCA, 2004.
- Fonseca, S Anta. "El Café de Sombra: Un Ejemplo de Pago de Servicios Ambientales Para Proteger La Biodiversidad." *Gaceta Ecológica*, 2006.
- Fortmann, Louise. "Introduction: Doing Science Together." In *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together*, edited by Louise Fortmann. John Wiley & Sons, 2009.
- . , ed. *Participatory Research in Conservation and Rural Livelihoods: Doing Science Together*. John Wiley & Sons, 2009.
- Fowler, Cary. "Protecting Farmer Innovation: The Convention on Biological Diversity and the Question of Origin." *Jurimetrics*, 2001, 477–88.
- Fraser, Nancy. "From Redistribution to Recognition? Dilemmas of Justice in a 'post-Socialist' Age." *New Left Review*, 1995.
- Fricker, Miranda. *Epistemic Injustice: Power and the Ethics of Knowing*. Oxford University Press, 2007.
- Gadgil, Madhav, Natabar Shyam Hemam, B Mohan Reddy, Fikret Berkes, Carl Folke, and Johan Colding. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience. Linking Social and Ecological*

- Systems: Management Practices and Social Mechanisms for Building Resilience*, 2000.
- Ganti, Tejaswini. "Neoliberalism." *Annual Review of Anthropology*, 2012.
- García, Miguel Angel. "La Reserva Ecológica Campesina de Los Chimalapas," 1997.
- García Aguirre, Miguel Ángel. *Chimalapas: La Defensa Del Territorio Y de Los Bienes Naturales Como Un Factor de Identidad Indígena*. Ceccam, Brot für die Welt, 2015.
- Gavin, Michael C., Joe McCarter, Aroha Mead, Fikret Berkes, John Richard Stepp, Debora Peterson, and Ruifei Tang. "Defining Biocultural Approaches to Conservation." *Trends in Ecology and Evolution* 30, no. 3 (2015): 140–45.
- Ghilarov, Alexej. "What Does 'biodiversity' mean—scientific Problem or Convenient Myth?" *Trends in Ecology & Evolution* 11, no. 7 (1996).
- Gibson, Johanna. *Community Resources*. Ashgate, 2005.
- Gillespie, Alexander. *Conservation, Biodiversity and International Law*. Edward Elgar Publishing, 2013.
- Gómez, Magdalena. *Derecho Indígena*. INI, 1997.
- Gómez Rivera, Magdalena. "Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance." *Nueva Antropología* 26, no. 78 (2013): 43–62.
- . "Los Pueblos Indígenas Y La Razón de Estado En México: Elementos Para Un Balance." *Nueva Antropología* 26, no. 78 (2013): 43–62.
- Gonzales, Tirso. "Sense of Place and Indigenous People's Biodiversity Conservation in the Americas." In *Seeds of Resistance, Seeds of Hope: Place and Agency in the Conservation of Biodiversity*, edited by Jenna Andrews-Swann Nazarea, Virginia D., Robert E. Rhoades, 85–106. The University of Arizona Press, 2013.
- González, Marco Antonio, and Martha Elena Miranda. "El Sistema Comunitario Para El Manejo Y Protección de La Biodiversidad: Cuenca Huatulco-Copalita, Oaxaca, México." *LEISA Revista de Agroecología*, 2003, 7:9.
- González Galván, Jorge Alberto. "La Reforma Constitucional En Materia Indígena." *Cuestiones Constitucionales* 7 (2002).
- . "La Reforma Constitucional En Materia Indígena." *Cuestiones Constitucionales* 7 (2002).
- González Jácome, Alba. "El Maíz Como Producto Cultural Desde Tiempos Antiguos." In *Desgranando Una Mazorca. Orígenes Y Etnografía de Los Maíces Nativos*, edited by Carmen Morales Valderrama and Catalina Rodríguez Lazcano, 2009.
- Gonzalez Rojas, Aldo. "Antecedentes Y La Situación Del Maíz En México En Año 2008." In *In Diez Anos Del Foro "La Globalizacion Y Los Seres Naturales de La Sierra Juarez, Oaxaca"*. Oaxaca: UNSJO, n.d.
- . "Protuesta de Autonomia Del Bueblo Bëne Xidza." In *Diez Anos Del Foro "La Globalizacion Y Los Seres Naturales de La Sierra Juarez, Oaxaca"*, edited by S.C. UNSJO, n.d.
- Gonzalo, Oviedo, Peter Bill Larsen, and Luisa Maffi. *Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity*. WWF, Terralingua, 2000.
- Gray, Andrew, Helen Newing, and Alejandro Parellada, eds. *From Principles to Practice: Indigenous Peoples and Biodiversity Conservation in Latin America*. FPP, IWGIA, AIDESEP, 1999.
- Grear, Anna. "Deconstructing Anthropos: A Critical Legal Reflection on 'Anthropocentric' Law and Anthropocene 'Humanity.'" *Law and Critique*, 2015.

- Grear, Anna M. "Towards a New Horizon: In Search of a Renewing Socio-Juridical Imaginary." *Oñati Socio-Legal Series* 3, no. 5 (2013).
- Grosvenor, Gilbert M., Anthony R de Souza, and Mac Chapin. "The Coexistence of Indigenous Peoples and the Natural Environment in Central America: A Special Map Supplement to Research & Exploration." *National Geographic Society*, 1992.
- Grounds, Richard A., George E. Tinker, and David Eugene Wilkins, eds. *Native Voices: American Indian Identity and Resistance*. University Press of Kansas, 2003.
- Guerrero, Marie Annette Jaimes. "Biocolonialism and Isolates of Historic Interest." In *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions*, edited by Mary Riley, Altamira Press., 251:277, 2004.
- Guha, Ramachandra. "Two Phases of American Environmentalism: A Critical History." In *Decolonizing Knowledge: From Development to Dialogue: From Development to Dialogue*, edited by Stephen Apffel-Marglin and A. Frédérique Marglin. Oxford University Press, 1996.
- Gutierrez, Norma Georgina, and Jose Antonio Gomez Espinoza. "Relatos de Vida Productiva Alrededor Del Maíz. Maíz, Milpa, Conocimiento Y Saberes Locales En Comunidades Agrícolas." In *Saberes Colectivos Y Diálogo de Saberes En México*, 329–44. Ibero Puebla, México: UNAM, INAH, 2011.
- Haapala Jr, John E. "Farmers' Rights." *J. Envtl. L. & Litig.* 19 (2004).
- Habib Irfân. "Science and Cultural Diversity in a Postcolonial Context," n.d. <http://etnomatematica.org/articulos/Irfhan1.pdf>.
- Haila, Yrjö. "Biodiversity and the Divide between Culture and Nature." *Biodiversity and Conservation* 8, no. 1 (1999): 165–81.
- Haila, Yrjö, and Jari Kouki. "The Phenomenon of Biodiversity in Conservation Biology." *Annales Zoologici Fennici*, 1994.
- Hale, Charles, Rosamel Millamán. "Cultural Agency and Political Struggle in the Era of the Indio Permitido." In *Cultural Agency in the Americas*, edited by Doris Sommer, 281–304. Duke University Press, 2006.
- Hale, Charles R. "Neoliberal Multiculturalism." *PoLAR: Political and Legal Anthropology Review*, 2005.
- . "Rethinking Indigenous Politics in the Era of the 'Indio Permitido.'" *NACLA Reports on the Americas. Report on Race, Part 1*, 2004.
- Halewood, Michael, ed. *Farmers' Crop Varieties and Farmers' Rights: Challenges in Taxonomy and Law*. Routledge, 2016.
- Haraway, Donna. *Simians, Cyborgs, and Women: The Reinvention of Women*. London and New York: Routledge, 1991.
- . "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (1988): 575.
- Hardin, Garrett. "The Tragedy of the Commons." *Science*, 1968.
- Harmon, David. *In Light of Our Differences How Diversity in Nature and Culture Makes Us Human*. Washington London: Smithsonian Institution Press, 2002.
- . "Losing Species, Losing Languages: Connections between Biological and Linguistic Diversity." *Southwest Journal of Linguistics* 15, no. 1/2 (1996): 89–108.
- Harold, J. Barnett, and Chandler Morse. *Scarcity and Growth: The Economics of Natural Resource Availability*. 3rd ed. Routledge, 2013.
- Harvey, Nail. "El Capitalismo Ecológico Y El Plan Puebla-Panamá: La Transformación

- de Los Recursos Naturales En Mesoamérica.” *Comercio Exterior* 54, no. 4 (2004): 319–27.
- . “Globalización, Ciudadanía Y Conflictos Por La Biodiversidad En Chiapas.” *Revista Memoria* 162 (2002): 13–18.
- Hayden, Cori. “From Market to Market: Bioprospecting’s Idioms of Inclusion.” *American Ethnologist*, 2003.
- . *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*. Princeton University Press, 2003.
- Heath, John Richard. “Enhancing the Contribution of the Land Reform to Mexican Agricultural Development.” Policy Research and External Affairs, 1990.
- Hébert, Martin, Rosen, Michael Gabriel. “Community Forestry and the Paradoxes of Citizenship in Mexico: The Cases of Oaxaca and Guerrero.” *Canadian Journal of Latin American and Caribbean Studies*, 2007.
- Hernández, Rosalva Aída, Rachel Sieder, María Teresa Sierra, ed. *Justicias Indígenas Y Estado: Violencias Contemporáneas*. FLACSO Mexico/CIESAS, 2013.
- Hernández Díaz, Jorge. *Reclamos de La Identidad: La Formación de Las Organizaciones Indígenas En Oaxaca*. Miguel Angel Porrua, 2001.
- Hirokawa, Keith H., ed. *Environmental Law and Contrasting Ideas of Nature: A Constructivist Approach*. Cambridge: University Press, 2014.
- Hirokawa, Keith H., and Rik Scarce. “Nature in a Constructed World: Grounding the Constructivist Method.” In *Environmental Law and Contrasting Ideas of Nature A Constructivist Approach*, edited by Keith H. Hirokawa, 2014.
- Hoekema, A. J., Willem Assies, Gemma van der Haar, ed. *The Challenge of Diversity. Indigenous Peoples and Reform of the State in Latin America*. Amsterdam: Thela Thesis, 2000.
- Ingold, Tim, Gisli Palsson, ed. *Biosocial Becomings: Integrating Social and Biological Anthropology*. Cambridge University Press, 2013.
- Ingold, Tim. “Two Reflections on Ecological Knowledge.” In *Nature Knowledge: Ethnoscience, Cognition, Identity*, edited by Ortalli Gheraldo Sangha Glauco, 301–11. New York Oxford: Berghahn Books, 2003.
- Iorns Magallanes, Catherine. “Native American Values and Laws of Exclusion.” In *Keith H. Hirokawa, Ed., Environmental Law and Contrasting Ideas of Nature: A Constructivist Approach*, edited by Keith H. Hirokawa, 200–229. Cambridge: University Press, 2014.
- Iturralde, Diego. “Iturralde, Diego. "Desarrollo Indígena; Los Retos de Final de Siglo.” edited by Magdalena Gomez. INI, 1997.
- Jagosh, Justin, Ann C. Macaulay, Jon Salsberg, Pierre Pluye, Paula L. Bush, Jim Henderson, Erin Sirett, et al. “Uncovering the Benefits of Participatory Research: Implications of a Realist Review for Health Research and Practice.” *The Milbank Quarterly* 90, no. 2 (2012): 311–46.
- Johnson, Leslie M., and Eugene S. Hunn, eds. *Landscape Ethnoecology: Concepts of Biotic and Physical Space*. New York, Oxford: Berghahn Books, 2010.
- Jonas, Harry, Holly Shrumm, and Sanjay Kabir Bavikatte. “Biocultural Community Protocols and Conservation Pluralism.” *Policy Matters*, 2010.
- Jones, Alison. “Rethinking Collaboration: Working the Indigene-Colonizer Hyphen.” In *Handbook of Critical Indigenous Methodologies*, edited by Norman K. Denzin, Yvonna S. Lincoln, and Linda Tuhiwai Smith. Sage, 2008.

- Juan Carlos Martínez. "Oaxaca: Un Paso Atrás. Reforma Neoliberal Y Regresión En El Reconocimiento de Derechos Autonómicos de Los Pueblos Indígenas: El Caso de Tlahuitoltepec." In *Justicias Indígenas Y Estado: Violencias Contemporáneas*, edited by María Teresa Sierra, Rosalva Aída Hernández, and Rachel Sieder, 123–56. FLACSO Mexico/CIESAS, 2013.
- "Keniuuj Omachiuel Moyektalis in Altepet (Ordenamiento Ecológico Territorial Del Municipio de Cuetzalan: Instrumento Pare La Coexistencia SocioambientalIntegral." In *Conferencia Con La Universidad Autónoma de Ciudad Juárez, February 12, . Ciudad Juárez, Chihuahua*, 2011.
- Kerry, Ten Kate, and Sarah A. Laird. "Biodiversity and Business: Coming to Terms with the 'grand Bargain.'" *International Affairs* 76, no. 2 (2000): 241–64.
- . *Ten Kate, Kerry, and Sarah A. Laird. The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit-Sharing*. Earthscan, 1999.
- Krakoff, Sarah. "A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation." *Or. L. Rev.* 83 (2004).
- Krauss, Michael. "Linguistics and Biology: Threatened Linguistic and Biological Diversity Compared." *Cls* 32 (1996): 69–75.
- Kupper, Patrick. *Creating Wilderness: A Transnational History of the Swiss National Park*. Vol. 4. Berghahn Books, 2014.
- Kymlicka, Will. "Liberal Multiculturalism as a Political Theory of State–Minority Relations." *Political Theory*, 2017.
- . "Neoliberal Multiculturalism?" *Social Resilience in the Neoliberal Era*, 2013.
- . "The Rise and Fall of Multiculturalism? New Debates on Inclusion and Accommodation in Diverse Societies." *International Social Science Journal*, 2010.
- La Cadena, Marisol De. *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham: Duke university press, 2016.
- . "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond 'Politics.'" *Cultural Anthropology*, 2010.
- La Peña, Guillermo De. "A New Mexican Nationalism? Indigenous Rights, Constitutional Reform and the Conflicting Meanings of Multiculturalism." *Nations and Nationalism*, 2006.
- LaDuke, Winona. *Recovering the Sacred: The Power of Naming and Claiming*. South End Press, 2005.
- . "Traditional Ecological Knowledge and Environmental Futures." *Colo. J. Int'l Env'tl. L. & Pol'y* 5 (1994): 127.
- Laird, S.A., and R.P. Wynberg. *Laird, S.A. and R.P. Wynberg. 2013. Bioscience at a Crossroads: Access and Benefit Sharing in a Time of Scientific, Technological and Industry Change*. Secretariat of the Convention on Biological Diversity, 2013.
- Laird, Sarah A., ed. *Biodiversity and Traditional Knowledge: Equitable Partnerships in Practice*. London, Sterling, VA: Earthscan, 2002.
- Lara Ponce, Estuardo, Laura Caso Barrera, and Mario Aliphat Fernández. "El Sistema Milpa Roza, Tumba Y Quema De Los Maya Itzá De San Andrés Y San José, Petén Guatemala." *Ra Ximhai*, 2012.
- Latour, Bruno. *We Have Never Been Modern*. Harvard University Press, 2012.
- Latour, Bruno, and Steve Woolgar. *Laboratory Life: The Construction of Scientific Facts*. Princeton University Press, 1987.
- Lausche, Barbara J., and Françoise Burhenne-Guilmin. *Guidelines for Protected Areas*

- Legislation*. 81st ed. IUCN, 2011.
- Law, John. *After Method: Mess in Social Science Research*. Routledge, 2004.
- Lawrence, Peter. *Justice for Future Generations: Climate Change and International Law*. Edward Elgar Publishing, 2014.
- Lazos Chavero, Elena. "Diálogos de Saberes: Retos Frente a La Transnacionalización de La Agricultura En México." In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Paul Hersch Argueta, Arturo, E. Corona-Martínez. Ibero Puebla, México: UNAM, INAH, , 2011.
- . "La Milpa En El Sur de Yucatán: Dinámica Y Crisis." *Estudios de La Cultura Maya*, 1999.
- Leff, Enrique. "Diálogo de Saberes, Saberes Locales Y Racionalidad Ambiental En La Construcción Social de La Sustentabilidad." In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Arturo Argueta, Eduardo Corona-Martínez, and Paul Hersch, 379–91. Ibero Puebla, México : UNAM, INAH, 2011.
- . "La Geopolítica de La Biodiversidad Y El Desarrollo Sustentable." *Revista Del Observatorio Social de América Latina* 17 (2005).
- . *Racionalidad Ambiental: La Reapropiación de La Naturaleza. La Reapropiación Social de La Naturaleza*, 2004.
- Lightbourne, Muriel. *Food Security, Biological Diversity and Intellectual Property Rights*. Ashgate, 2009.
- Loh, Jonathan, and David Harmon. "A Global Index of Biocultural Diversity." *Ecological Indicators* 5, no. 3 (2005): 231–41.
- López Arévalo, Jorge. "Chiapas Y El Sistema Roza, Tumba Y Quema: Producir CO2 Y Reproducir Miseria." *Chiapas Paralelo*, April 14, 2014. <https://www.chiapasparalelo.com/opinion/2014/04/chiapas-y-el-sistema-roza-tumba-y-quema-producir-co2-y-reproducir-miseria/>.
- Lovejoy, Thomas E. "Biodiversity: What Is It?" In *Biodiversity II: Understanding and Protecting Our Biological Resources*, edited by Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson. Joseph Henry Press, 1996.
- Lucia, Vito De. "Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law." *Journal of Environmental Law*, 2015. doi:10.1093/jel/equ031.
- Luna Martínez, Jaime. *Eso Que Lllaman Comunalidad*. Oaxaca: Colección Diálogos, 2010.
- . "Origen Y Ejercicio de La Comunalidad." *Cuadernos Del Sur, Revista de Ciencias Sociales* 18, no. 34 (2013).
- Maffi, Luisa. "Language, Knowledge, and Indigenous Heritage Rights." In *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*, edited by Luisa Maffi. Washington, DC: Smithsonian Institution Press, 2001.
- . "Linguistic, Cultural, and Biological Diversity." *Annual Review of Anthropology* 34, no. 1 (2005): 599–617.
- . *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*. Washington, DC: Smithsonian Institution Press, 2001.
- . "Position Paper." In *Interdisciplinary Working Conference on Endangered Languages, Endangered Knowledge, Endangered Environments*. Berkeley, California, 1996.
- Maffi Luisa, Woodley Ellen. *Biocultural Diversity Conservation: A Global Sourcebook*.

- Routledge, 2012.
- . *Biocultural Diversity Conservation: A Global Sourcebook*. Routledge, 2012.
- Routledge, 2012.
- Mander, Jerry, Victoria Tauli-Corpuz, ed. *Paradigm Wars: Indigenous Peoples' Resistance to Globalization*. Sierra Club Books, 2006.
- Marcus, George E. "Ethnography In/of the World System: The Emergence of Multi-Sited Ethnography." *Annual Review of Anthropology* 24, no. 1 (1995): 95–117.
- Marin, Patricia Lucia Cantuária., ed. *Providing Protection for Plant Genetic Resources*. The Hague, London, New York: Kluwer Law International, 2002.
- Martin, Gary J., Claudia I. Camacho Benavides, Carlos A. Del Campo García, Salvador Anta Fonseca, Francisco Chapela Mendoza, and Marco Antonio González Ortiz. "Indigenous and Community Conserved Areas in Oaxaca, Mexico." *Management of Environmental Quality: An International Journal*, 2011.
- Martínez, Tomas, Mirna Isela. Vallejo-Nieto, Francisco Delfín. Gurri-Garí, Dolores Ofelia. Molina-Rosales, Dióodoro Granados, Georgina Florencia, López Ríos, et al. "Historia de La Agricultura En México." *Revista de Geografía Agrícola*, 2003.
- Martínez Espinoza, Manuel Ignacio. "Reconocimiento Sin Implementación Un Balance Sobre Los Derechos de Los Pueblos Indígenas En América Latina." *Revista Mexicana de Ciencias Políticas Y Sociales*, 2015.
- Mathews, Andrew S. "Suppressing Fire and Memory: Environmental Degradation and Political Restoration in the Sierra Juárez of Oaxaca, 1887–2001." *Environmental History*, 2003.
- Mathews, Andrew S. "Power/knowledge, Power/ignorance: Forest Fires and the State in Mexico." *Human Ecology*, 2005.
- Mayer, Philipp. "Biodiversity—the Appreciation of Different Thought Styles and Values Helps to Clarify the Term." *Restoration Ecology* 14, no. 1 (2006): 105–11.
- McAfee, Kathleen. "Corn Culture and Dangerous DNA: Real and Imagined Consequences of Maize Transgene Flow in Oaxaca." *Journal of Latin American Geography*, 2003.
- . "Selling Nature to Save It? Biodiversity and Green Developmentalism." *Environment and Planning D: Society and Space*, 1999.
- Meadows, Donella H., Dennis L. Meadows, Jorgen Randers, and William W. Behrens. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. New York: Universe Books, 1972.
- Meer, Nasar, and Tariq Modood. "How Does Interculturalism Contrast with Multiculturalism?" *Journal of Intercultural Studies*, 2012.
- Meinard, Yves, Coq, Sylvain. "A Constructivist Approach toward a General Definition of Biodiversity." *Ethics, Policy & Environment* 17, no. 1 (2014): 88–104.
- Méndez-López, María Elena, Eduardo García-Frapolli, Diana J. Pritchard, María Consuelo Sánchez González, Isabel Ruiz-Mallén, Luciana Porter-Bolland, and Victoria Reyes-García. "Local Participation in Biodiversity Conservation Initiatives: A Comparative Analysis of Different Models in South East Mexico." *Journal of Environmental Management*, 2014.
- Merino-Pérez, L, and Gerardo Segura-Warnholtz. "Las Políticas Forestales Y de Conservación Y Sus Impactos En Las Comunidades Forestales En México." In *Los Bosques Comunitarios de México. Manejo Sustentable de Paisajes Forestales*, edited by David B. Bray and L Merino-Pérez, 21–49. Instituto Nacional de Ecología,

- 2007.
- Merino-Pérez, Leticia, Leticia Merino Pérez, and L Merino Pérez. *Conservación O Deterioro. El Impacto de Las Políticas Públicas En Las Instituciones Comunitarias Y En Los Usos de Los Bosques En México*. Mexico: Instituto Nacional de Ecología, 2004.
- Merry, Sally Engle. *Human Rights and Gender Violence: Translating International Law into Local Justice*. University of Chicago Press, 2009.
- . “Transnational Human Rights and Local Activism: Mapping the Middle.” *American Anthropologist*, 2006.
- Mies, Maria, and Vandana Shiva. *Ecofeminism*. Zed Books, 1993.
- Minteer A., Ben, and Robert Manning E., eds. *Manning Reconstructing Conservation: Finding Common Ground*. Island Press, 2003.
- Minteer Ben A., Manning, Robert E., ed. *Reconstructing Conservation Finding Common Ground*. Island Press, n.d.
- Mitrović, Ljubiša. “Bourdieu’s Criticism of the Neoliberal Philosophy of Development, the Myth of Mondialization and the New Europe (an Appeal for the Renewal of Critical Sociology).” *Philosophy, Sociology and Psychology*, 2005.
- Moore, Joslin L., Lisa Manne, Thomas Brooks, Neil D. Burgess, Robert Davies, Carsten Rahbek, Paul Williams, and Andrew Balmford. “The Distribution of Cultural and Biological Diversity in Africa.” In *Proceedings of the Royal Society of London B: Biological Sciences* 269 No. 1501, 1645–53, 2002.
- Mounolou, Jean-Claude. “Biodiversity at the Molecular Level.” In *Biodiversity and Global Change*, edited by Otto Thomas Solbrig, H. M. V an Emden, and P. G. W. J. Van Oordt. Cab international, 1994.
- Mühlhäusler, Peter. *Language of Environment, Environment of Language: A Course in Ecolinguistics*. Battlebridge Publications, 2003.
- Nader, Laura. *Harmony Ideology: Justice and Control in a Zapotec Mountain Village*. Stanford University Press, 1991.
- Nancy Fraser. *Scales of Justice: Reimagining Political Space in a Globalizing World*. Columbia University Press, 2010.
- National Wildlife Federation. “Environmental Reform of International Trade,” 1994.
- Navaz, Liliana Suárez, Rosalva Aída Hernández Castillo, ed. Navaz, Liliana Suárez, and Rosalva Aída Hernández Castillo, Eds. *Descolonizando El Feminismo: Teorías Y Prácticas Desde Los Márgenes*. Cátedra, 2008.
- Nazarea, Virginia D., ed.. *Ethnoecology: Situated Knowledge/located Lives*. University of Arizona Press, 1999.
- Nelson, Michael P., and Baird J. Callicott, eds. *The Wilderness Debate Rages on: Continuing the Great New Wilderness Debate*. University of Georgia Press, 2008.
- Nemogá-Soto, Gabriel Ricardo. “Diversidad Biocultural: Innovando En Investigación Para La Conservación.” *Acta Biológica Colombiana* 21, no. 1 (2016).
- . “La Necesidad de Integrar Las Cosmovisiones Indígenas En Los Sistemas de Protección de Los Conocimientos Tradicionales. Hacia Un Enfoque Desde La Diversidad Biocultural,” 2013.
- Nietschmann, Bernard. *The Interdependence of Biological and Cultural Diversity*. Center for World Indigenous Studies, 1992.
- Noss, Reed. “Is There a Special Conservation Biology?” *Ecography* 22, No. 2 22, no. 2 (1999).

- Novellino, Dario. "Contrasting Landscapes, Conflicting Ontologies: Assessing Environmental Conservation on Palawan Island (the Philippines)." In *Ethnographies of Conservation: Environmentalism and the Distribution of Privilege*, edited by David G. Anderson and Eeva Berglund, 171–88. New York, Oxford: Berghahn Books, 2003.
- Núñez González, Denise. "Peasants' Right to Land: Addressing the Existing Implementation and Normative Gaps in International Human Rights Law." *Human Rights Law Review*, 2014.
- OECD. "Review of Agricultural Policy in Mexico," 1997.
- Oguamanam, Chidi. "Intellectual Property Rights in Plant Genetic Resources: Farmers' Rights and Food Security of Indigenous and Local Communities." *Drake Journal of Agricultural Law* 11 (2006): 273–305.
- Oranismo oficial del comité de ordenamiento territorial integral de Cuetzalan. "Ordenamiento Territorial Integral Keniuj Omachiuel Moyektalis in Altepét," February 2011.
- Ortiz Monasterio Quintana, Ana. "¿Entre La Espada Y La Pared? Conocimiento Indígena Y Bioprospección En México." *Ciencias*, 2006.
- Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, 1990.
- Padoch, Christine, and Miguel Pinedo-Vasquez. "Saving Slash-and-Burn to Save Biodiversity." *Biotropica*, 2010.
- Pavlik, Steve, Wildcat, Daniel R. *Destroying Dogma: Vine Deloria, Jr. and His Influence on American Society*. Fulcrum Publishing, 2006. Paperback, 2006.
- Peña Azcona, Ivett. "Percepción Socio Ambiental de Las Áreas Destinadas Voluntariamente Para La Conservación En El Istmo Oaxaqueño." El Colegio de la Frontera Sur, 2015.
- Perramond, Eric P. "A Brief History of Neoliberalism by David Harvey." *The Professional Geographer*, 2006.
- Petitjean, Patrick, Catherine Jami, Anne Marie Moulin, and Equipe REHSEIS (Centre national de la recherche scientifique (France)). *Science and Empires: Historical Studies about Scientific Development and European Expansion*. Boston Studies in the Philosophy of Science. Springer Science & Business Media, 1992.
- Philippe Descola. *Beyond Nature and Culture*. University of Chicago Press, 2013.
- Pierotti, Raymond, Daniel, Wildcat. "Traditional Ecological Knowledge: The Third Alternative (Commentary)." *Ecological Applications* 10, no. 5 (2000): 1333–40.
- Pilgrim, Sarah., and Jules N Pretty. "Nature and Culture: An Introduction." In *Nature and Culture: Rebuilding Lost Connections*, 1–20, 2010.
- Pilgrim, Sarah, Jules Pretty, Bill Adams, Fikret Berkes, Simone Ferreira de Athayde, Nigel Dudley, Eugene Hunn, et al. "The Intersections of Biological Diversity and Cultural Diversity: Towards Integration." *Conservation and Society* 7, no. 2 (2009): 100.
- Pimbert, Michel. "Transforming Knowledge and Ways of Knowing for Food Sovereignty." *Iied*, 2006.
- Pimbert, Michel P. "The Need for Another Research Paradigm." *Seedling* 11, no. 2 (1994): 20–25.
- Porter-Bolland, Luciana, Isabel Ruiz-Mallén, Claudia Camacho-Benavides, and Susannah R. McCandless. *Community Action for Conservation: Mexican*

- Experiences. Community Action for Conservation: Mexican Experiences*, 2013.
- Posey, Darrell A., Dutfield, Graham. *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities*. Ottawa: International Development Research Center, 1996.
- Posey, Darrell Addison. "Introduction: Culture and Nature - the Inextricable Link." In *Cultural and Spiritual Values of Biodiversity*, 1999.
- Posey, Darrell A. "Protecting Indigenous Peoples' Rights to Biodiversity." *Environment: Science and Policy for Sustainable Development* 38, no. 8 (1996): 6–45.
- Posey, Darrell Addison, ed. *Cultural and Spiritual Values of Biodiversity*. Intermediate technology publications, 1999.
- Pretty, Jules, Bill Adams, Fikret Berkes, S F de Athayde, Nigel Dudley, Eugene Hunn, Luisa Maffi, et al. "How Do Biodiversity and Culture Intersect?" *World* 26, no. April 2016 (2008): 33–42.
- Puig, Salvador Martí. "The Emergence of Indigenous Movements in Latin America and Their Impact on the Latin American Political Scene Interpretive Tools at the Local and Global Levels." *Latin American Perspectives* 37, no. 6 (2010): 74–92.
- Quijano, Anibal. "Colonialidad Del Poder, Eurocentrismo Y América Latina." *La Colonialidad Del Saber: Eurocentrismo Y Ciencias Sociales. Perspectivas Latinoamericanas*, 2000.
- . "The Challenge of the 'Indigenous Movement' in Latin America." *Socialism and Democracy* 19, no. 3 (2005): 55–78.
- Radonic, Lucero. "Environmental Violence, Water Rights, and (Un) Due Process in Northwestern Mexico." *Latin American Perspectives*, 2015.
- Ramos Morales, Mario Fernando. "Punto de Partida: Principios de Un Pensamiento Propio." not published, n.d.
- Rao, R. R. "Tribal Wisdom and Conservation of Biological Diversity." In *Ethnobiology and Biocultural Diversity: Proceedings of the Seventh International Congress of Ethnobiology*, edited by Zarger KI. Rebecca Stepp R. John, Wyndham S. Felice, 84–94. Athenes, Georgia: International Society of Ethnobiology, 2002.
- Rapport, David, and Luisa Maffi. "The Dual Erosion of Biological and Cultural Diversity: Implications for the Health of Eco-Cultural Systems." In *Nature and Culture: Rebuilding Lost Connections*, 2010.
- . "The Dual Erosion of Biological and Cultural Diversity: Implications for the Health of Ecocultural Systems." In *Nature and Culture: Rebuilding Lost Connections*. London: Earthscan, 103–22., 2010.
- Reaka-Kudla, Marjorie, Wilson, Don E., Wilson, Edward O., ed. *Biodiversity II: Understanding and Protecting Our Biological Resources*. Joseph Henry Press, 1996.
- Reaka-Kudla, Marjorie L., Don E. Wilson, and Edward O. Wilson. "Santa Rosalia, The Turnong of the Century, and a Nwe Agw of Expòpration." In *Biodiversity II: Understanding and Protecting Our Biological Resources*, edited by Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson. Joseph Henry Press, 1996.
- Redford, Kent H. "The Ecologically Noble Savage." *Cultural Survival Quarterly* 15, no. 1 (1991): 46–48.
- Restrepo, Eduardo, and Arturo Escobar. "'Other Anthropologies and Anthropology Otherwise': Steps to a World Anthropologies Framework." *Critique of Anthropology* 25, no. 2 (2005): 99–129.
- Rivera Cusicanqui, Silvia. "Chhixinakax Utxiwa. Una Reflexión Sobre Prácticas Y

- Discursos Descolonizadores.” *Modernidad Y Pensamiento Descolonizador. Memoria Del Seminario Internacional*, 2006.
- Robinson, Daniel. *Confronting Biopiracy: Challenges, Cases and International Debates*. Routledge, 2010.
- Robles Hernández, Sofía, and Rafael Cardoso Jiménez, eds. *Floriberto Díaz Escrito: Comunalidad, Energía Viva Del Pensamiento Mixe*. Vol. 14. UNAM, 2007.
- Robson, James P., and Fikret Berkes. “Sacred Nature and Community Conserved Areas.” *Nature and Culture: Rebuilding Lost Connections*, Earthscan/James & James.” In *Nature and Culture: Rebuilding Lost Connections, Earthscan/James & James*, edited by Sarah Pilgrim and Jules N. Pretty, 197–216. Earthscan, 2010.
- Robson, James P., and Fikret Berkes. “Chapter 8 Sacred Nature and Community Conserved Areas,” 2009, 1–16.
- Rodolfo Stavenhagen. “Indigenous Peoples and the State in Latin America: An Ongoing Debate.” In *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy*, edited by Rachel Sieder. Palgrave Macmillan, 2002.
- Rodrigues Pinto, Simone, and Carlos Federico Domínguez Ávila. “Sociedades Plurales, Multiculturalismo Y Derechos Indígenas En América Latina.” *Política Y Cultura* 35 (2011): 49–66.
- Rosen, Walter G. “What’s in a Name? The Idea of Biodiversity: Philosophies of Paradise David Takacs,” 1997.
- Rühs, Nathalie, and Aled Jones. “The Implementation of Earth Jurisprudence through Substantive Constitutional Rights of Nature.” *Sustainability (Switzerland)*, 2016.
- Ruth, Patrick. “Biodiversity: Why Is It Important?” In *Biodiversity II: Understanding and Protecting Our Biological Resources*, edited by Marjorie L. Reaka-Kudla, Don E. Wilson, and Edward O. Wilson. Joseph Henry Press, 1996.
- Saad-Filho, Alfredo, and Deborah Johnston. *Neoliberalism: A Critical Reader*. University of Chicago Press, 2005.
- Sajeva, Giulia. “Rights with Limits: Biocultural Rights—between Self-Determination and Conservation of the Environment.” *Journal of Human Rights and the Environment* 6, no. 1 (2015): 30–54.
- Saldaña Martínez, Tomás. “Historia de La Agricultura En México.” In *III Taller Latinoamericano Prevención de Riesgos En El Uso de Plaguicidas*. Xalapa, Veracruz, 1983.
- Salgado Ramírez, Álvaro. “Santiago Lachiguiri: Respuestas Comunitarias Ante La Política Ambiental. Pago Por Servicios Ambientales Y Áreas de Conservación Voluntaria,” 2014.
- Salinas, Miguel, Margaret Skutsch, and Jon Lovett. “La Roza Tumba Y Quema En El Contexto de REDD+.” In *Estado Actual Del Conocimiento Del Ciclo Del Carbono Y Sus Interacciones En México: Síntesis a 2015*, 2015.
- Salinas de Gortari, Raúl. *Agrarismo Y Agricultura En El México Independiente Y Posrevolucionario. Vida Y Pensamiento de México*, 1988.
- Santos, Boaventura. *Santos, Boaventura. 2014. Epistemologies of the South. Justice against Epistemicide*. Boulder: Paradigm Publishers, 2014.
- Santos, Boaventura De Sousa. “Nuestra America: Reinventing a Subaltern Paradigm of Recognition and Redistribution.” *Rutgers L. Rev.* 54, no. 1049. (2001).
- Santos, Boaventura de Sousa. *Towards a New Legal Common Sense*. London:

- Butterworth, 2002.
- Santos, Boaventura de Sousa, João Arriscado Nunes, and Maria Paula Meneses. "Opening up the Canon of Knowledge and Recognition of Difference." In *Another Knowledge Is Possible: Beyond Northern Epistemologies*, edited by Boaventura de Sousa Santos, 2007.
- Santos de Sousa, Boaventura. *Toward a New Common Sense Law, Science and Politics in the Paradigmatic Transition*. New York, London : Routledge, 1995.
- Sarkar, Sahotra. "Defining Biodiversity; Assessing Biodiversity." *Monis*, 2002.
- "Secundo Foro Nacional, Tejiendo La Resistencia Por La Defensa de Nuestros Territorios, Haciendo Memoria, San Juan Jaltepec de Candayoc, Mixe, 13 Y 14 de Noviembre 2009." San Juan Jaltepec de Candayoc, 2009.
- Shiva, Vandana. "Farmers' Rights, Biodiversity and International Treaties." *Economic and Political Weekly*, 1993.
- . *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*. Palgrave Macmillan, 1993.
- . *Who Really Feeds the World?* Zed Books Ltd, 2016.
- Sieder, Rachel. "Legal Cultures in the (Un)rule of Law: Indigenous Rights and Juridification in Guatemala." In *Cultures of Legality: Judicialization and Political Activism in Latin America*, edited by Javier Couso, Alexandra Huneeus, and Rachel Sieder. Cambridge University Press, 2010.
- . , ed. *Multiculturalism in Latin America. Indigenous Rights, Diversity and Democracy*. Palgrave Macmillan, 2002.
- Singel, Wenona T. "Cultural Sovereignty and Transplanted Law: Tensions in Indigenous Self-Rule." *Kan. JL & Pub. Pol'y* 15 (2005): 357:368.
- Skutnabb-Kangas, Tove, Luisa Maffi, and David Harmon. *Skutnabb-Kangas, Tove, Luisa Maffi, and David Harmon. Sharing a World of Difference: The Earth's Linguistic, Cultural and Biological Diversity*. Unesco, 2003.
- Smith, Linda Tuhiwai. *Decolonizing Methodologies: Research and Indigenous Peoples*. Zed books, 1999.
- Sobrevila, Claudia. *The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners*. Washington DC: The World Bank , 2008.
- Solbrig, Otto Thomas. "Biodiversity: An Introduction." In *Biodiversity and Global Change*, edited by Otto Thomas Solbrig, H. M. Van Emden, and P. G. W. J. Van Oordt. Cab international, 1994.
- Solomon, Maui. "Intellectual Property Rights and Indigenous Peoples' Rights and Responsibilities." In *Indigenous Intellectual Property Rights: Legal Obstacles and Innovative Solutions* , edited by Mary Riley, 221–50. Altamira Press, 2004.
- Sousa Santos, Boaventura de. "Epistemologies of the South and the Future." *From the European South* 1 (2016): 17–29.
- Sousa Santos, Boaventura De. "Introduction. Creating a Distance in Relation to Western-Centric Political Imagination and Critical Theory." In *Epistemologies of the South. Justice against Epistemicide*, 2014.
- Stavenhagen, Rodolfo. "Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, Mission to Mexico," 2004.
- Steger, Manfred B, and Ravi K Roy. *Neoliberalism. A Very Short Introduction*, 2010.
- Stapp J. R.; Wyndham, F S, and R K Zarger. "Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology, October 2000." In

- Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology, Athens, Georgia, USA, October 2000.*, 2000.
- Stiglitz, Joseph E. "More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus." *Revista de Economía Política*, 1999.
- Stoianoff, Natalie P., ed. *Accessing Biological Resources Complaint with Convention on Biological Diversity*. The Hague, London, New York: Kluwer Law International, 2004.
- Stokowski, Patricia A. "Community Values in Conservation." In *Reconstructing Conservation: Finding Common Ground*, 279–295., 2003.
- Sutherland, William J. "Parallel Extinction Risk and Global Distribution of Languages and Species." *Nature* 423 (2003): 276–279.
- Takacs, David. *The Idea of Biodiversity: Philosophies of Paradise*. Johns Hopkins University Press, 1996.
- Taylor, Charles. *Multiculturalism. Examining the Politics of Recognition*, 1994.
- Taylor, Peter Leigh. "Conservation, Community, and Culture? New Organizational Challenges of Community Forest Concessions in the Maya Biosphere Reserve of Guatemala." *Journal of Rural Studies* 26, no. 2 (2010): 173–84.
- Tequio Jurídico A.C. "El PROCEDE En Comunidades Indígenas No PROCEDE, PROCEDE-FANAR-RAJA- El Mismo Disfrazo." Oaxaca : Tequio Jurídico A.C, Rosa Luxemburg Stiftung, 2016.
- "Terminación, Cancelación O Anulación O Terminación Anticipada de La Certificación Número CONANP-03/2003 'Zona de Preservación Cerro de Las Flores.'" File with the author, 2010.
- Thomas, Deborah A., and M. Kamari Clarke. "Globalization and Race: Structures of Inequality, New Sovereignities, and Citizenship in a Neoliberal Era." *Annual Review of Anthropology*, 2013.
- Tobin, Brendan. *Indigenous Peoples, Customary Law and Human Rights—why Living Law Matters*. Routledge, 2014.
- Tobin, Brendan M. "Bridging the Nagoya Compliance Gap: The Fundamental Role of Customary Law in Protection of Indigenous Peoples' Resource and Knowledge Rights." *Law Env't & Dev. J* 9 (2013): iv.
- Tolan, Patrick. "Ecocentric Perspectives on Global Warming: Toward an Earth Jurisprudence." *The Global Studies Journal*, 2008.
- Toledo, Víctor M., Patricia Moguel. "El Café En México, Ecología, Cultura Indígena Y Sustentabilidad." *Ciencias* 43 (1996).
- Toledo, Victor M., and Narciso Barrera-Bassols. *La Memoria Biocultural: La Importancia Ecológica de Las Sabidurías Tradicionales*. Junata de Andalucía, Icaria Editorial, 2008.
- Toledo, Víctor M. *Ecocidio En México: La Batalla Final Es Por La Vida*. Grijalbo, 2015.
- . "Indigenous Peoples and Biodiversity." In *Encyclopedia of Biodiversity*, 2013.
- Toledo, Víctor M., Eckart Boege, and Narciso Barrera- Bassols. "The Biocultural Heritage of Mexico: An Overview." *Landscape* 2, no. 6 (2010).
- Toledo, Víctor Manuel. "Del 'diálogo de Fantasmas' Al 'diálogo de Saberes': Conocimiento Y Sustentabilidad Comunitaria." In *Saberes Colectivos Y Diálogo de Saberes En México*, edited by Arturo Argueta Villamar, Eduardo Corona M, and Paul Hersch. bero Puebla, México: UNAM, INAH, 2011.
- Toledo, Victor Manuel, JR Stepp, FS Wyndham, and RK Zarger. "Ethnoecology: A

- Conceptual Framework for the Study of Indigenous Knowledge of Nature.” In *Ethnobiology and Biocultural Diversity: Proceedings of the 7th International Congress of Ethnobiology*, 2002.
- Tsosie, Rebecca. “Engaging the Spirit of Racial Healing within Critical Race Theory: An Exercise in Transformative Thought.” *Michigan Journal of Race and Law*, 2005.
- Udall, Stewart L. *The Quiet Crisis*. New York: Holt, Rinehart and Winston, 1963.
- UNSJIO S.C., and Grassroots International. “UNSJIO,S.C, Grassroots International, La Trampa de Las Áreas Naturales Protegidas Y El Pago Por Servicios Ambientales.” Folleto . Oaxaca, n.d.
- Valle, María del Carmen, Solleiro, José Luis Del. *El Cambio Tecnológico En La Agricultura Y Las Agroindustrias En México*. México : Siglo XXI UNAM-IIES, 1996.
- Vennum, Thomas. *Wild Rice and the Ojibway People*. Minnesota historical society Press, 1988.
- Verschuuren, Bas, Wilde, Robert, McNeely, A. Jeffrey, Oviedo Gonzalo, ed. *Sacred Natural Sites: Conserving Nature and Culture*. Routledge, 2010.
- Visvanathan, Shiv. *A Carnival for Science: Essays on Science, Technology and Development*. Calcutta, Chennai, Mumbai: Delhi: Oxford University Press, 1997.
- Viveiros, Eduardo, and De Castro. “Cosmological Deixis and Amerindian Perspectivism.” *The Journal of the Royal Anthropological Institute*, 1998.
- Walsh, Catherine. *Interculturalidad Crítica Y (de) Colonialidad: Ensayos Desde Abya Yala*. Abya-Yala, Instituto Científico de Culturas Indígenas, 2012.
- Warrior, Robert Allen. “Intellectual Sovereignty and The Struggle for An American Indian Future. Chapter 3 of Tribal Secrets.” *Wicazo Sa Review*, 1992.
- White Jr., Lynn. “The Historical Roots of Our Ecological Crisis.” In *This Sacred Earth: Religion, Nature, Environment* , edited by Roger Gottlieb. New York: Routledge, 1996.
- Whitt, Laurelyn. *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*. Cambridge University Press, 2009.
- . *Science, Colonialism, and Indigenous Peoples: The Cultural Politics of Law and Knowledge*. Cambridge University Press, 2009.
- Wilder, Benjamin T., o’mears Carolyn, Monti Laura, and Gary Paul Nabhan. “Ethnoscience, the ‘Oldest science’.A Needed Complement to Academic Science to Stem the Losses of Biodiversity, Indigenous Languages, and Livelihoods.” In *Ethnobiology for the Future: Linking Cultural and Ecological Diversity*, edited by Gary Paul Nabhan. University of Arizona Press, 2016.
- William, Martin, and Francesco Salamini. “A Meeting at the Gene.” *EMBO Reports* 1, no. 3 (2000): 208–10.
- Williams, Robert A. *Savage Anxieties: The Invention of Western Civilization*. Macmillan, 2012.
- Wilmsen, Carl, F. Elmendorf William, Fisher Larry, Ross Jacquelyn, Sarathy Brinda, and Wells Gail, eds. *Partnerships for Empowerment: Participatory Research for Community-Based Natural Resource Management*. Routledge, 2012.
- Wilson, Edward O. *Biodiversity*. Washington, DC: National Academy of Science Press, n.d.
- Young, Iris Marion. “Five Faces of Oppression.” *Geographic Thought A Praxis Perspective*, 2009.

Zalasiewicz, Jan, Mark Williams, Alan Haywood, and Michael Ellis. "The Anthropocene: A New Epoch of Geological Time?" *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 2011.

International Conventions, Laws, Documents and Reports

UN Bodies

Committee on the Elimination of Racial Discrimination, *Concluding Observations*, CERD/C/MEX/CO/15-16-17, April 4, 2012.

Committee on Economic, Social and Cultural Rights, *Concluding Observations*, E/C.12/MEX/CO/4, 9 June 2006.

Committee on the Rights of the Child, *Concluding Observations*, CRC/C/MEX/CO/4-5, 3 July 2015.

Commission on Human Rights, *Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People*, Rodolfo Stavenhagen, Addendum Mission to Mexico, Sixtieth session Item 15 of the provisional agenda, E/CN.4/2004/80/Add.2 23 December 2003.

Conference of the Parties CBD, *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*, 29 October 2010.

Food and Agriculture Organization of the United Nations (FAO), *International Treaty on Plant Genetic Resources for Food and Agriculture*, November 3 2001.

Human Rights Council, *Draft Declaration on the rights of peasants and other people working in rural areas*, A/HRC/WG.15/1/2, June 30 2013

Human Rights Council, *Group on the issue of human rights and transnational corporations and other business enterprises on its mission to Mexico*, A/HRC/35/32/Add.2, 7 April 2017.

Human Rights Committee, *Concluding Observations*, CCPR/C/MEX/CO/5, 7 April 2010.

United Nations Conference on Environment and Development (UNCED), *Agenda 21*, in Rio de Janeiro, Brazil, 3 to 14 June 1992.

United Nations Environment Programme (UNEP), *Convention on Biological Diversity*, UNEP/Bio. Div./CONF/1, 24 March, 1992.

U.N. General Assembly, *Rio Declaration on Environment and Development*, A/CONF.151/26 (Vol. I) August 12 1992.

U.N. General Assembly, *Convention on Biological Diversity*, A/RES/65/161, 11 March 2011.

U.N. General Assembly, *Convention on Biological Diversity*, A/RES/65/161, 11 March 2011.

U.N. General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1, 21 October 2015.

U.N. General Assembly, *Report of the Special Rapporteur of the Human Rights Council on the Rights of Indigenous Peoples*, Victoria Tauli-Corpuz, A/71/229, 26 July 2016.

Office of the High Commissioner for Human Rights (OHCHR), *Report on the Relationship Between Climate Change and Human Rights*, U.N. Doc. A/HRC/10/61 (15 January 2009).

OHCHR, Leaflet No. 10: Indigenous Peoples and the Environment <http://www.ohchr.org/Documents/Publications/GuideIPleaflet10en.pdf>.

UN HRC Draft Declaration on the rights of peasants and other people working in rural areas A/HRC/15/1/2.

U.N. Sub-commission on Prevention of Discrimination and Protection of Minorities, *Study on the Protection of the Cultural and Intellectual Property of Indigenous Peoples*, 45th Sess., Agenda Item 14, U.N. Doc. E/CN.4/Sub.2/13993/28 (1993).

Commission on Human Rights, *Report on Prevention of Discrimination and Protection of Indigenous Peoples and Minorities*, Fifty-Third Session, E/Cn.4/Sub.2/2001/21, 2001.

World Commission on Environment and Development, *Report: Our Common Future*, United Nations Secretary General, "Development and International Co-operation: Environment", A/42/427, 4 August, 1987.

UNEP, Conference Of The Parties To The Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets*, UNEP/CBD/COP/DEC/X/229 October 2010.

International Labour Organization (ILO), *Indigenous and Tribal Peoples Convention*, (No. 169), 1989.

IUCN, UNEP. "WWF (1980) World conservation strategy." *World Conservation Union, United Nations Environment Programme, World Wide Fund for Nature, Gland*.

Secretariat of the Convention on Biological Diversity, *Cartagena Protocol on Biosafety to the Convention on Biological Diversity*, Montreal on 29 January 2000.

Secretariat of the Convention on Biological Diversity, *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity* 29, Nagoya, October 2010.

Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 4*, Montréal, 2014.

IUCN, Report *Rights and Conservation in a Diverse and Sustainable World: A Journey at the 2008 IUCN World Conservation Congress*, Barcelona, Spain 5 to 14 October 2008.

United Nations, *Millennium Development Goals 2015*; United Nations, *Sustainable Development Goals*.

United Nation Educational, Scientific and Cultural Organization (UNESCO), *Universal Declaration on Cultural Diversity*, Paris, November 2 2001.

UNESCO, *Main Lines of an Action Plan for the Implementation of UNESCO Universal Declaration on Cultural Diversity*, General Conference of UNESCO, Paris, 2 November 2001.

UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage*, Paris, October 17 2003.

UNESCO, *Convention on the Protection and Promotion of the Diversity of Cultural Expressions* Environmental Law, October 20 2005.

UNESCO, *Links between biological and cultural diversity-concepts, methods and experiences, Report of an International Workshop*, Paris 2008.

WIPO, *The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore*, Background Brief - No. 2, 2016.

World Bank (WB), *Operational Directive Environmental Action Plans*, OD 04, 1989.

WB, *Operational Directive Indigenous Peoples*, OD 4.20, September 1991.

WB, Mexico-Community Forestry II (PROCYMAF II), Report n. AB145, September 23, 2003.

WB, *Project Appraisal, Document on a Proposed Loan in the Amount of US \$21.3 Million to the United Mexican States for the Second Community Forestry Project*, Report n. 26644, October 25, 2003.

WB, *Project Performance Assessment Report Mexico First and Second Community Forestry Projects* (Loan Numbers 4137 and 7207), report. 55416 June 28, 2010.

World Resources Institute, International Union for Conservation of Nature, and Natural Resources. *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*. World Resources Inst, 1992.

World Resources Institute, World Bank, and United Nations Development Programme, *Tropical Forests: A Call for Action*, World Resources Institute, Washington, D.C., 1985.

World Resources Institute, International Union for Conservation of Nature, and Natural Resources. *Global biodiversity strategy: Guidelines for action to save, study, and use earth's biotic wealth sustainably and equitably*. World Resources Inst, 1992.

World Resources Institute United Nations Development Programme, United Nations Environment Programme, and World Bank. *World Resources Report 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty* Washington, D.C, 2005.

Inter-American System on Human Rights:

Inter-American Commission on Human Right (IACHR), Country report, *The Human Rights Situation in Mexico*, OEA/Ser.L/V/II.Doc. 44/15, 31 31 December 2015 Original: Spanish, paras 252-260.

IACHR, hearing *Derecho al uso y aprovechamiento de los recursos naturales y consulta previa respecto al pueblo indígena Cucapá en México*, 22 October 2008.

IACHR, hearing *Destrucción del Patrimonio Biocultural (PatBio) de México debido a la puesta en marcha de diversos megaproyectos*, 30 October, 2014; IACHR, hearing *Pueblos indígenas Yucatán*, 5 December 2016.

Inter-American Court on Human Rights, *Kaliña and Lokono Peoples v. Suriname*, 23 February, 2016.

Other international documents

International Society of Ethnobiology (2006). International Society of Ethnobiology Code of Ethics (with 2008 additions). <http://ethnobiology.net/code-of-ethics/>.

North American Free Trade Agreement.

Laws and Documents

Colombian Constitutional Court, T-622 de 2016, November, 10 2016.

New Zealand, Te Awa Tupua (Whanganui River Claims Settlement), Act 2017 (2017/7), March, 20 2017.

U.S. Agency for International Development, *U.S. Strategy on the Conservation of Biological Diversity. An Interagency Task Force Report to Congress*, Washington, D.C, 1985.

U.S. Agency for International Development, *USAID's Biodiversity Conservation Programs*, Washington, D.C 2003.

U.S. Department of State. 1982. *Proceedings of the U.S. Strategy Conference on Biological Diversity*. November 16–18, 1981, Washington, D.C. Publication No. 9262. U.S. Department of State, Washington, D.C.

U.S. Department of State, *Humid Tropical Forests: AID Policy and Guidance*. U.S. Department of State Memorandum. Government Printing Office, Washington, D.C. 1985.

Mexican Laws and Documents

Federal Level

Comisión de Concordia y Pacificación, *Propuesta Reformas Constitucionales*, 29 de noviembre de 1996.

Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), *Capital Natural de México: Acciones Estratégicas Para Su Valoración, Preservación y Recuperación*, 2012.

CONABIO (2001-2007), *Proyecto de Conservación de la Biodiversidad por Comunidades Indígenas de los Estados de Guerrero, Michoacán y Oaxaca*.

CONABIO (2013), *Gobernanza de la Biodiversidad: Participación justa y equitativa de los beneficios que se deriven del uso y manejo de la diversidad biológica*, <http://governanzabiodiversidad.mx/proyecto/equipo>.

Comisión Nacional de Áreas Naturales Protegidas (CONANP) *Programa Nacional de Áreas Naturales Protegidas*, 2007-2012.

GEF, *Indigenous Communities and Biodiversity*, https://www.thegef.org/sites/default/files/publications/indigenous-community-biodiversity_0.pdf.

Mexican Government, *Estrategia Nacional sobre Biodiversidad de México y Plan de Acción*, 2016-2030.

Tribunal Permanente de los Pueblos, Capítulo México, Audiencia temática “Devastación ambiental y derechos de los pueblos”, 5 al 17 de noviembre de 2013.

Ley de Desarrollo Rural Sustentable, Diario Oficial de la Federación, December 7 2001, last amendment, January 12, 2012.

Ley General de Desarrollo Forestal Sustentable, Diario Oficial de la Federación, February 25, 2003, last amendment, January, 24, 2017.

Ley General del Equilibrio Ecológico y la Protección al Ambiente, Diario Oficial de la Federación, January 28 1988, last amendment, January, 9 2015.

Ley General de Vida Silvestre, Diario Oficial de la Federación, July 3, 2000 last amendment December 19 216.

United States of Mexico, *Ley Sobre Producción, Certificación Y Comercio De Semillas* , June 15, 2007.

Ley Federal de Variedades Vegetales (Federal act on Vegetal varieties); United States of Mexico, *Ley Federal De Variedades Vegetales*, April 9, 2012.

Decreee “ por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía”, Diario Oficial de la Federación, December 20 2013.

SEMARNAT, CONAFOR, *Evaluación del Programa de Desarrollo Forestal Comunitario 2004 PROCYMAF II*, November 2004.

SEMARNAT, *Acuerdo por el que se establecen las Reglas de Operación para el Programa de Desarrollo Regional Sustentable*, Diario Oficial, February 26, 2007.

SEMARNAT, *Áreas destinadas voluntariamente a la conservación*, http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D3_R_BIODIV04_09&IBIC_user=dgeia_mce&IBIC_pass=dgeia_mce.

Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA), PROCAMPO , Diario Oficial de la Federación, 1993.

SAGARPA, PROAGRO Productivo, Diario Oficial de la Federación, December 31, 2016.

Suprema Corte de Justicia de la Nación, Protocolo de Actuación para Quienes Imparten Justicia en Casos Relacionados con Proyectos de Desarrollo e Infraestructura, 2014.

Suprema Corte de Justicia de la Nación, Protocolo de Actuación para Quienes Imparten Justicia en Casos que Involucren Derechos de Personas, Comunidades y Pueblos Indígenas, 2014.

Registro Agrario Nacional (RAN), *Programa de Certificación de Derechos Ejidales y Titulación de Solares*.

RAN, Programa de Regularización y Registro de Actos Jurídicos Agrarios, February 15, 2016.

State and Local Level

Gobierno del Estado de Puebla Secretaría General de Gobierno, Orden Jurídico Poblano, *Programa de Ordenamiento Ecológico Local del Territorio del Municipio de Cuetzalan del Progreso*, December 3, 2010.

Oaxaca State, *Ley de Derechos de los Pueblos Y Comunidades Indígenas del Estado de Oaxaca*, June 19, 1998.

Oaxaca State, *Código de Instituciones Políticas y Procedimientos Electorales de Oaxaca*, 1995.

Oaxaca State, *La Ley Orgánica para el Gobierno del Estado de Oaxaca*, 1824.

Oaxaca State, *Constitución Política del Estado Libre Y Soberano de Oaxaca*, bando solemne 4 April, 1922, last amendment 9 August, 2017.

Capulálpam de Méndez, *Declaratoria Si a la Vida, No a la Minería*, November 22, 2014.

Puerto Antonio, Acta de Asamblea, July 10, 2015.

Santiago Lachiguiri, Acto de Terminación, cancelación o anulación o Terminación anticipada de la Certificación número CONANP-03/2003 “Zona de Preservación Cerro de las Flores”, Junio 2011.

Ayuntamiento Constitutional San Puerto del Mar, *Acta de Sesión Solemne de Cabildo Municipal- Territorio Prohibido para la Minería*, 2015.

Estatutos comunales:

Capulálpam de Méndez

La Trinidad Ixtlán

Magdalena Teitipac

San Antonio Analco

San Antonio del Barrio

San Carlos Yautepec

San Miguel Chongos

San Miguel del Puerto

San Miguel Maninaltepec

San Pablo Macuiltonguis

San pedro Tlatepusco

San Juan Yagila

Santa Catarina Ixtepeji

Santa Catarina Lachatao

Santa Cruz Tepetotutla

Santa María Huatulco

Santa Maria Xochixtepec

Santa Maria Yahuiche

Santa María Zoogochi

Santa María Xadani

Santo Domingo Tonala

Santiago Lachiguiri

Santiago Tlatepusco

Santiago Teotlaxco

Santiago Xiacuí

Indigenous Peoples Documents and Declarations

Forest Peoples Programme, the International Indigenous Forum on Biodiversity and the Secretariat of the Convention on Biological Diversity (2016), *Local Biodiversity Outlooks; Indigenous Peoples' and Local Communities' Contributions to the Implementation of the Strategic Plan for Biodiversity 2011-2020. A complement to the fourth edition of the Global Biodiversity Outlook*. Moreton-in-Marsh, England.

The Kari-Oca Declaration, The World Conference of Indigenous Peoples on Territory, Environment and Development. Brazil, May 30, 1992.

The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples, Aotearoa New Zealand, 1993.

Declaration of Indigenous People of the Western Hemisphere Opposing the Human Genome Diversity Project, 1995.

The "Heart of the Peoples" Declaration, From the North American Indigenous Peoples Summit on Biological Diversity and Biological Ethics, 1997.

The International Cancun Resolution of Indigenous Peoples 5th WTO Ministerial Conference - Cancun, Quintana Roo, Mexico, 12 September 2003.

The Manukan Declaration of the Indigenous Women's Biodiversity Network Manukan, Sabah, Malaysia, 4-5 February, 2004.

CBD's International Regime: Indigenous Activist Organizations Call for No Access Zones to Genetic Resources and Indigenous Knowledge, Kuala Lumpur, Malaysia February 19, 2004.

Collective Statement of Indigenous Peoples on the Protection of Indigenous Knowledge, UN Permanent Forum on Indigenous Issues, New York, May 12 2004.

Declaration on Indigenous Peoples' Rights to Genetic Resources and Indigenous Knowledge Convened at the Sixth Session of the United Nations Permanent Forum on Indigenous Issues, New York, May 14-25, 2007.

Declaración de Yvapuruvu, October, 17 -18 2013, Granja Educativa Yvapuruvu, Altos, Paraguay.

Online Videos

Colectivo Tajpianij, June 30, 2017, <https://www.youtube.com/watch?v=W3Ci8k0q-Qw>

Philippe Descola and Bruno Latour, *Approaches to the Anthropocene: A Conversation with Philippe Descola and Bruno Latour*, <https://www.youtube.com/watch?v=MDeGaYkhVSo>.

Bruno Latour, *Why Gaia is not the Globe* <https://www.youtube.com/watch?v=7AGg-oHzPsM>.

Debra Harry, *Biocolonialism*, Bioneers, <https://www.youtube.com/watch?v=xezo8kFd0DU>.

Donna Haraway, *2016 Anthropocene Consortium Series*, <https://www.youtube.com/watch?v=fWQ2JYFwJWU&t=4509s>.

SEDAFPA, *Sistema de Roza, Tumba y Quema*, <https://www.youtube.com/watch?v=ysOfqO0f6L8>.

La historia de hoy, *Técnica de quema agrícola es peligrosa*, <https://www.youtube.com/watch?v=ggY5kX80BYs>.

Appendix-List of Interviews

N	Name	Affiliation	Location, Date
1	Argueta Andres	Red de Etnoecología Y Patrimonio Biocultural, CONACYT- Etnobiologo	Patzcuaro,Michoacan December 12, 2016
2	Aguilar Hugo	Servicio Mixe- Lawyer	City of Oaxaca, September 13, 2016
3	Anta Fonseca, Salvador	Former SEMARNAT Director Oaxaca; consultant for ONGs	City of Oaxaca, November 14, 2016
4	Bolanos Mario	President of the executive border and technical coordinator Grupo Mesofilo	City of Oaxaca, December 8, 2016
5	Castilleja Gonzalez Aida	Red de Etnoecología Y Patrimonio Biocultural, CONACYT-Anthropologist	Patzcuaro,Michoacan Morelia, November 23; December 12, 2016
6	Castro Rodriguez Angelica	EDUCA	City of Oaxaca, September 14; December 13, 2016
7	Chapela Mendoza, Francisco	ERA- Director	City of Oaxaca, August 24; November 21, 2016
8	Cerami Andrea	CEDAM- Human and Environmental Rights Lawyer	Mexico City, October 4, 2016
9	Consejo Juan José	INSO- Director	City of Oaxaca, September 19, 2016
10	González, Marco Antonio	GAIA- Director	City of Oaxaca, November 15, 2016
11	Linares Gabriela	UNOSJO- Director	Guelatao de Juárez, Octubre 6, 2016
12	Martínez Luna Jaime	Zapotec philosopher and intellectual	City of Oaxaca, November 28, 2016
13	Mondragón Fernando	GeoConservación- Director	City of Oaxaca, September 13; November 21, 2016
14	Morales Erika	Tequio Juridico- Lawyer	City of Oaxaca, November 15, 2016
15	Morales Reyes Ariel	Agrarian Lawyer	City of Oaxaca, November 16, 2016
16	Palacios Pavel	CONANP- Director Pas Oaxaca	City of Oaxaca, October 10, 2016
17	Perez Marcelo Carlo	La Integradora de Comunidades Indígenas y Campesinas de Oaxaca, A.C. (ICICO)- Director	City of Oaxaca, October 11, 2016
18	Pesoa Margarita	INSO- Communication Director	City of Oaxaca, September 19, 2016
19	Ricardo Ramírez	CONABIO	City of Oaxaca, November 30, 2016
20	Ramos Fernando	University of the Sierra Norte- Professor	Ixtlán de Juárez, December 5, 2016

21	Reyes Mendez Neftanli	EDUCA	City of Oaxaca, September 14; December 13, 2016
22	Soberón Jorge	Former Director CONABIO	Lawrence Kansas, March 15, 2016
23	Toledo Victor	Red de Etnoecología Y Patrimonio Biocultural, CONACYT- Etnoecologo	Patzcuaro, Michoacan December 12, 2016
24	Marco Antonio Vásquez- Dávila	Red de Etnoecología Y Patrimonio Biocultural, CONACYT- Etnobiologo	City of Oaxaca, September 9, 2016
25	Zuñiga Ivan	CONABIO/Consejo Civil Mexicano para la Silvicultura Sostenible	México City, November 30; December 17, 2016
26	Wildcat Daniel	Professor at Haskell Indian Nations University	Lawrence, Kansas April 24, 2016
27	Benicio Orozco	Tesorero	Santiago Lachiguiri, October 26, 2016
28	Benicio Morales Rolando	Affected Farmer	Santiago Lachiguiri, October 28, 2016
29	Eloisa	Curandera	Santiago Lachiguiri, October 26, 2016
30	Escobar Eutiquio Enriquez	Secretario Comisariado de Bienes Comunales	Santiago Lachiguiri, October 27, 2016
31	Flayrian Ana		Santiago Lachiguiri, October 27, 2016
32	Flayrian Enzo	Comisariado de Bienes Comunales	Santiago Lachiguiri, October 27, 2016
33	Galvan Toledo Costantino	Ex-President of the Municipality 99-01 UCIRI- member	Santiago Lachiguiri, October 27, 2016
34	Gonzalez Bulmaro	Regidor Municipality	Santiago Lachiguiri, October 26, 2016
35	Lopez Itaia	Teacher /Local politician	Santiago Lachiguiri, October 27, 2016
36	Lopez Garcia Erman Eduardo	Affected Farmer	Santiago Lachiguiri, October 28, 2016
37	Mendoza Delfino	Affected Farmer	Santiago Lachiguiri, October 27, 2016
38	Orazio Pascuci	Affected Farmer	Santiago Lachiguiri, October 26, 2016
39	Ramirez Bencio Genico	Affected Farmer	Santiago Lachiguiri, October 28, 2016
40	Ramez Arsenio Osorio	Secretario Comisariado de Bienes Comunales 2009-2012- Affected Farmer	Santiago Lachiguiri, October 28, 2016
41	Villa Nueva Leoncio	Suplente Sindico Municipality	Santiago Lachiguiri, October 27, 2016
42	Villa Ramirez Delfino	Municipality	Santiago Lachiguiri, October 27, 2016
43	Comes Hernández Marco Antonio	Consejo de Caracterizado	Capulálpam de Méndez, October 22, 2016
44	Cosemes Reyes Javier	Consejo de Caracterizado	Capulálpam de Méndez, October 22, 2016
45	Gracia López Francisco	Regidor Municipal	Guelatao de Juárez,

			October 8, 2016
46	García Juárez Javier	Consejo de Caracterizado	Capulálpam de Méndez, October 22, 2016
47	Hernández Susana	Presidenta del día municipal	Capulálpam de Méndez, November 10, 2016
48	Hernández Tor Baltazar	Consejo de Caracterizado	Capulálpam de Méndez, October 21, 2016
49	Luna Bautista Benjamín	Consejo de Caracterizado	Capulálpam de Méndez, October 22, 2016
50	Luna Regina	Curandera	Capulálpam de Méndez, October 20 2016
51	Martínez Netzar	Comisariado de Bienes Comunales	Capulálpam de Méndez, October 20; November 10, 2016
52	Martínez Morales Aurelio	Ex Presidente Municipal	Capulálpam de Méndez, October 21 2016
53	Martínez Guadalupe	Person in charge of a communal restaurant	Capulálpam de Méndez, October and November, 2016
54	Ramírez Domínguez Miguel	UZACI	Capulálpam de Méndez, November 10, 2016
55	Reyes Cosmos Eleazar	Consejo de Caracterizado	Capulálpam de Méndez, October 22, 2016
56	Reyes Eloisa	Tourist Guide	Capulálpam de Méndez, October 21, 2016
57	García Epifanio	Baker	Santa Maria Yahuiche, December 6, 2016
58	Guerra Antonio	Farmer	Santa Maria Yahuiche, December 7, 2016
59	Marcelo Fraci	Farmer	Santa Maria Yahuiche, December 6, 2016
60	Marcelo Rufino	Farmer	Santa Maria Yahuiche, December 6, 2016
61	Marcelo Ana	Farmer	Santa Maria Yahuiche, December 6, 2016
62	Abigil Estefania Marcel Lopez	Tourist Guide	Santa Maria Yahuiche, December, 2016.

63	Hernández Javier	Consejo de Vigilancia	Santa Maria Yahuiche, December 6, 2016
64	Paz Clara	Farmer	Santa Maria Yahuiche, December 7, 2016
65	Paz Enrique	Farmer	Santa Maria Yahuiche, December 7, 2016
66	Paz Pedro	Farmer	Santa Maria Yahuiche, December 6, 2016
67	Paz Aente	Farmer	Santa Maria Yahuiche, December 7, 2016
68	Paz Eliseo	Ex Comisariado de Bienes Comunales	Santa Maria Yahuiche, December 6, 2016
69	Ramírez Anita	Farmer	Santa Maria Yahuiche, December 7, 2016
70	Ramírez Bernarda	Farmer	Santa Maria Yahuiche, December 6, 2016
71	Ramírez Pascal	Comisariado de Bienes Comunales	Santa Maria Yahuiche, December, 2016
72	Reyes Delfino	Secretario de Bienes Comunales	Santa Maria Yahuiche, December, 2016
73	Reyes Luz	Teacher	Santa Maria Yahuiche, December 6, 2016
74	Reyes León		Santa Maria Yahuiche, December 6, 2016
75	Villa Margarita	Farmer	Santa Maria Yahuiche, December 6, 2016
76	García Clara		Santa María Xadani, November 18, 2016
77	García Oricio	Comisariado de Bienes Comunales	Santa María Xadani, November 18, 2016
78	Martínez Guadalupe	Consejo de Vigilancia	Santa María Xadani, November 18, 2016
79	Ramírez Ana	Secretaria de Bienes Comunales	Santa María Xadani, November 18, 2016
89	Focus Group with 10 Comuneros	Among them: Comisariado de Bienes Comunales, Consejo de Vigilancia, Secretario de Bienes Comunales	Magdalena Teitipac, Tlacolula, November 14, 2016